S1020-2 (A)

STATE OF COLORADO
HIGHWAY SAFETY PLAN
FISCAL YEAR 1982

Prepared by the
DIVISION OF HIGHWAY SAFETY
Colorado Department of Highways
State of Colorado

with assistance of the
Division of Management Services
Colorado Department of Administration

for the
U. S. DEPARTMENT OF TRANSPORTATION
National Highway Traffic Safety Administration
and
Federal Highway Administration

COLORADO STATE DEPARTMENT OF HIGHWAYS
DIVISION OF HIGHWAY SAFETY

State & Community Programs
(303) 757-9381

September 15, 1981

Alcohol-Driving Countermeasures
(303) 757-9481

Mr. Robert C. O'Connell
Regional Administrator
National Highway Traffic
Safety Administration
555 Zang Street
Denver, Colorado 80228

Dear Mr. O'Connell:

By this letter, we are transmitting the Colorado Highway Safety Plan for Fiscal Year 1982. This Plan has been approved by the undersigned. The Division of Highway Safety is hereby authorized to implement the aforementioned program and the other activities required under Title 23, United States Code, Section 402 (Highway Safety Act), as amended.

COLORADO DEPARTMENT OF HIGHWAYS

Kenneth A. Torp

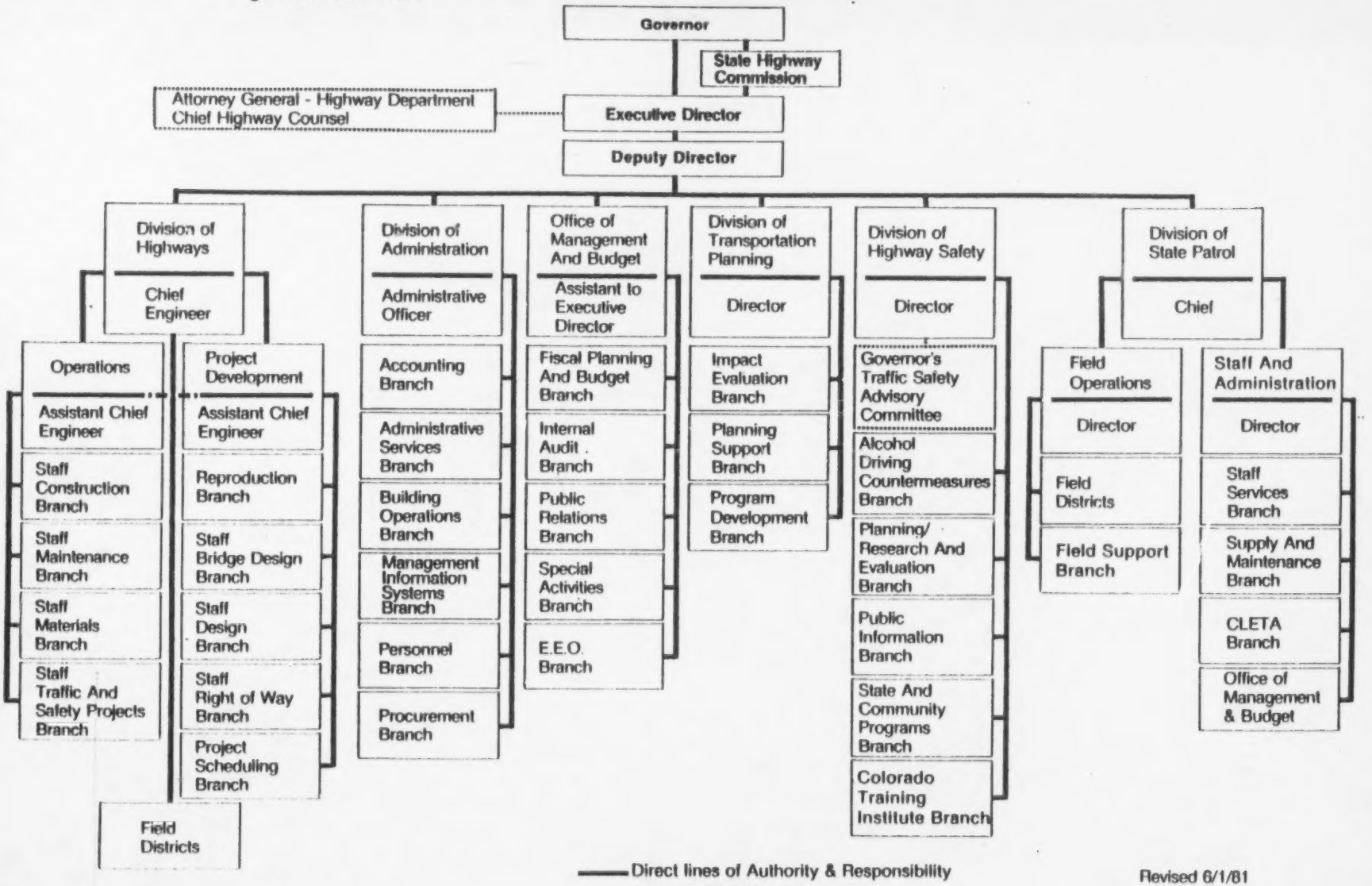
KENNETH TORP
Deputy Director

COLORADO DIVISION OF HIGHWAY SAFETY

Cordell Smith

CORDELL SMITH
Director

Department of Highways
Organization Chart



Revised 6/1/81

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SECTION I

COLORADO HIGHWAY SAFETY PLAN

FY 1982

1.0 Highway Safety Plan Summary

1.1 Certificates of Compliance

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COLORADO STATE DEPARTMENT OF HIGHWAYS
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Mr. Robert C. O'Connell
Regional Administrator
National Highway Traffic
Safety Administration
555 Zang Street
Denver, Colorado 80228

Dear Mr. O'Connell:

It is the judgment of this agency, based upon available information, that no real property will be purchased by the State or through this FY 1982 Highway Safety Plan that will affect the relocation of persons therefore requiring relocation assistance as designated under Public Law 91-646, the "Uniform Relocation Assistance Real Property Acquisition Policies Act of 1970."

Sincerely,

Cordell Smith, Director
Division of Highway Safety

CS:am

4201 EAST ARKANSAS AVENUE DENVER, CO 80222

COLORADO STATE DEPARTMENT OF HIGHWAYS
DIVISION OF HIGHWAY SAFETY

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September 15, 1981

Mr. Robert C. O'Connell
Regional Administrator
National Highway Traffic
Safety Administration
555 Zang Street
Denver, Colorado 80228

Dear Mr. O'Connell:

We are hereby making the following declaration to comply with the requirements of the Environmental Protection Agency.

It is the judgment of this agency, based upon available information, that no significant environmental impact will result from execution of this FY 1982 Colorado Highway Safety Plan.

Sincerely,

Cordell Smith

Cordell Smith, Director
Division of Highway Safety

CS:am

4201 EAST ARKANSAS AVENUE DENVER, CO 80222

STATE OF COLORADO

CERTIFICATE OF COMPLIANCE WITH
REQUIREMENTS OF U.S.C. 402(b)(1)

I hereby certify that:

(a) The Governor is responsible for the administration of the State's highway safety program through the Division of Highway Safety in accordance with Colorado Revised Statutes, 24-1-126(3)(c), 24-42-101/104, 43-5-401 and Department of Highways Policy Directive No. 800.

(b) The political subdivisions of the State are authorized by Colorado Revised Statutes 24-42-101/104 and Department of Highways Policy Directive No. 800 to carry out local highway safety programs within their jurisdictions as a part of the State highway safety program if such local highway safety programs are included in the approved Highway Safety Plan (HSP), under formal contract with the Division of Highway Safety and in accordance with the uniform standards promulgated by the Secretary of Transportation under 23 U.S.C. 402.

(c) At least 40 per centum of all Federal funds apportioned to the State under 23 U.S.C. 402 for any fiscal year will be expended by the political subdivisions of the State in carrying out local highway safety programs authorized in accordance with 23 U.S.C. 402(b)(1)(B), except to the extent that this requirement has been waived by the Secretary of Transportation in accordance with 23 U.S.C. 402(b)(2).

(d) The aggregate expenditure of funds of the State and its political subdivisions, exclusive of Federal funds, for highway safety programs will be maintained at a level which does not fall below the average level of such expenditures for fiscal years 1965 and 1966.

(e) The State's highway safety program provides for a comprehensive driver training program which includes the elements specified in 23 U.S.C. 402(b)(1)(E).

(f) The State's highway design criteria provides standards and review to ensure adequate and reasonable access for the safe and convenient movement of physically handicapped persons, including those in wheelchairs, across curbs constructed or replaced after July 1, 1976, at all pedestrian crosswalks throughout the State.

(g) Conservation of energy has been considered in developing the 1982 Highway Safety Plan. To the extent possible, we desire to emphasize energy considerations in the development and execution of all of our problem solution plans and tasks. Within the Division of Highway Safety, we will endeavor to maximize the efficient use of energy by purchasing and using energy efficient vehicles, by combining travel of staff members

whenever practicable, and by use of the telephone or written communications whenever such action is a suitable substitute for vehicular travel.

CORDELL SMITH, Director
Division of Highway Safety

Date SEP 2 8 1981

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DIVISION OF HIGHWAY SAFETY

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Mr. Robert C. O'Connell
Regional Administrator
National Highway Traffic
Safety Administration
555 Zang Street
Denver, Colorado 80228

Dear Mr. O'Connell:

It is my judgment, based upon available information and assurances by the State of Colorado, that this FY 1982 Highway Safety Plan has provided for full consideration of Title VI of the Civil Rights Act of 1964. These considerations are a part of any contracts or agreements which make up the Section 402 program activities outlined herein. Requirements for Civil Rights considerations are also a part of the operating procedures for this office and the Colorado Department of Highways.

Sincerely,

Cordell Smith, Director
Division of Highway Safety

CS:am

4201 EAST ARKANSAS AVENUE DENVER, CO 80222

1.2 COST SUMMARY

This summary of costs allocates $2,049,100 to projects determined necessary to carry out an effective highway safety program for Colorado. These projects have been carefully considered and are essential to the complete development of State goals for traffic safety (see Figures I.1 and I.2).

Priorities for funding I, II, and III will be shown on the following pages when a final determination of funding levels for fiscal year 1982 is made. These will take into account the guidelines from Region VIII, NHTSA, for obligation limitation levels as follows:

Priority I:	Expected level of combined NHTSA/FHWA 402 fund obligations for FY 1982.
Priority II:	Additional activities, should funds become available from underruns or cancelled projects.
Priority III:	Additional activities, should the State of Colorado receive any incentive or other funding.

The total costs for the program and each problem solution plan for the current fiscal year and three planning years, are shown on Figure I.2. Costs for each task for fiscal year 1982 are further delineated in Section 3.0 of the Plan to complete the total accounting.

A summary of expenditures by highway safety standard and year (from 1968 through 1980) and present obligations for FY 1981 is shown at Figure I.3.

The State program match for FY1982 federal funding will be provided when final allocations and obligation authority is received. At that time it will be possible to match federal funding by PSP to planned State and Local fund availability.

1.2.1 Summary of Costs and Priorities

FY 1982 HIGHWAY SAFETY PLAN

SUMMARY OF COSTS AND PRIORITIES

PSP #	PSP/OBJ/TASK TITLE	STD. #	FY 1982 $	FY 1981 $	TOTALS	I	II	III	402 $ TO LOCAL
82-01	REDUCE ALCOHOL RELATED CRASHES								
	11 Educate and Motivate Law Enforcement Personnel								
	01 Law Enforcement Seminars	308	33.8						
	02 Toxicology Program	308	10.0						
	03 Breathtesting Instruments	308	20.0						20.0
					63.8				
	12 Educate & Motivate Judicial Personnel								
	01 Deputy District Attorneys	308	2.5						2.5
	02 Judges	308	10.0						
					12.5				
	13 Rehabilitate DUI Offenders								
	01 Treatment Directory	308	1.5						1.5
					1.5				
	14 Solicit Public Education Support								
	01 Alcohol Awareness	308	23.2						23.2
	02 Alcohol Studies	308	2.0						2.0
	03 Film Libraries	308	10.0						10.0
	04 Staff Program Management	308	11.0						
					46.2				
	15 Improve Alcohol Traffic-related Data Base								
	01 ADDS Data System	308	23.1						
					23.1				
	PSP TOTAL				147.1				59.2

Figure I-1

FY 1982 HIGHWAY SAFETY PLAN

SUMMARY OF COSTS AND PRIORITIES

PSP #	PSP/OBJ/TASK TITLE	STD. #	FY 1982 $	FY 1981 $	TOTALS	I	II	III	402 $ TO LOCAL
82-02	REDUCE DRIVER BEHAVIOR RELATED CRASHES								
	21 Enforce Traffic Regulation Compliance								
	01 Urban STEP	315	220.0						208.0
	02 Police Traffic Services by Sheriffs/Police	315	107.0						95.0
					327.0				
	22 Law Enforcement Training								
	01 PTS Training	315	118.5						69.5
	02 Judicial Training	315	12.0						3.5
	03 Hazardous Materials Training	316	50.0						
	04 Staff Program Management	315	18.0						
					198.5				
	23 Police Traffic Services Improvement								
	01 PTS Management Studies	315	85.0						85.0
	02 Data Base Support (STEP-MIS)	310	124.4						124.4
	03 Staff Program Management	315	28.4						
					237.8				
	PSP TOTAL				763.3				682.9
82-03	EMERGENCY MEDICAL SERVICES								
	31 Emergency Medical Technician (EMT) Training								
	01 Initial Training	311	12.5						
	02 Refresher Training	311	5.0						
									50.0
	32 Emergency Medical Services Equip.								
	01 Quick Response Teams	311	50.0						
	33 National Emergency Aid Radio (NEAR)								
	01 Volunteer Program	311	15.0						

Figure I-1 (contd.)

FY 1982 HIGHWAY SAFETY PLAN

SUMMARY OF COSTS AND PRIORITIES

PSP #	PSP/OBJ/TASK TITLE	STD. #	FY 1982 $	FY 1981 $	TOTALS	I	II	III	402 $ TO LOCAL
82-03	EMERGENCY MEDICAL SERVICES (Contd.)								
	34 Program Management								
	01 Program Management	311	45.9						
	PSP TOTAL				128.4				50.0
82-04	IMPROVE TRAFFIC RECORDS SYSTEM								
	41 Improve Traffic Records								
	01 Safety Program Files	310	120.3						
	02 State Traffic Records Advisory Committee (STRAC)	310	20.0						
	42 Provide Data Support								
	01 National Accident Sampling Systems (NASS)	310							
	PSP TOTAL				140.3				
82-05	REDUCE ROADWAY RELATED CRASHES								
	51 Improve Safety								
	01 Hazardous Locations	609	110.0						
	02 Inventory of Signs & Signals	613	2.5						2.5
	03 Roadway Design & Improvement	612	10.0						
	04 Fatal Crash Site Investigation	609	2.0						
					124.5				

Figure I-1 (contd.)

FY 1982 HIGHWAY SAFETY PLAN

SUMMARY OF COSTS AND PRIORITIES

PSP #	PSP/OBJ/TASK TITLE	STD. #	FY 1982 $	FY 1981 $	TOTALS	I	II	III	402 $ TO LOCAL
82-05	REDUCE ROADWAY RELATED CRASHES (Contd.)								
	52 Improve Traffic Engineering Services								
	01 Urban Traffic Engineering Studies	613	83.0						83.0
	02 Rural Traffic Engineering Studies	613	8.0						8.0
					91.0				
	53 Support Management								
	01 Staff Technical Assistance	613	97.1						
	02 Traffic Engineering Training	613	13.3						5.3
					110.4				
	PSP TOTAL				325.9				98.8
82-06	PROVIDE DRIVER AND MOTORCYCLE SAFETY EDUCATION								
	61 Educate Young Drivers								
	01 Driver Education	304	21.6						10.1
	02 Motorcycle Safety Education	304	5.5						1.0
	03 Staff Program Management	304	23.6						
	PSP TOTAL				50.7				11.1
82-07	REDUCE PEDESTRIAN AND BICYCLE CRASHES								
	71 Educate Young Pedestrians & Bicyclists								
	01 K-8 Traffic & Bicycle Safety Education	314	17.0						5.5
	02 Program Management	314	17.7						
	PSP TOTAL				36.0				5.5

Figure I-1 (contd.)

FY 1982 HIGHWAY SAFETY PLAN

SUMMARY OF COSTS AND PRIORITIES

PSP #	PSP/OBJ/TASK TITLE	STD. #	FY 1982 $	FY 1981 $	TOTALS	I	II	III	402 $ TO LOCAL
82-08	IMPROVE DRIVER LICENSING AND ATTITUDE								
	81 Driver Licensing								
	01 Driver License Testing	305	7.0						
	02 Motor Vehicle Examiners Training	305	23.0						
					30.0				
	82 Driver Improvement								
	01 Driver Improvement School	305	14.0						
	02 Warning Letter	305							
					14.0				
	83 Program Management								
	01 Program Management	305	18.5						
					18.5				
	PSP TOTAL				62.5				
82-09	INCREASE USE OF OCCUPANT RESTRAINTS								
	91 Increase Use of Occupant Restraints								
	01 Infant/Child Restraints	304	23.5						
	02 Safety Belts	304	12.5						
					36.0				
	92 Staff Program Management								
	01 Staff Program Management	304	37.7						
					37.7				
	PSP TOTAL				73.7				

Figure I-1 (contd.)

FY 1982 HIGHWAY SAFETY PLAN

SUMMARY OF COSTS AND PRIORITIES

PSP #	PSP/OBJ/TASK TITLE	STD. #	FY 1982 $	FY 1981 $	TOTALS	I	II	III	402 $ TO LOCAL
82-10	IMPROVE MANAGEMENT SUPPORT								
	101 Improve Planning and Administration								
	01 Planning and Administration	300	210.0						
	02 Auditing	300	30.0						
	03 Program Development	300	20.0						
					260.0				
	102 Increase Public Awareness/Involvement								
	01 Public Information	300	41.2						
	02 Committee Support	300	20.0						
					61.2				
	PSP TOTAL				321.2				

Figure I-1 (contd.)

FY 1982 HIGHWAY SAFETY PLAN

SUMMARY OF COSTS AND PRIORITIES

PSP #	PSP/OBJ/TASK TITLE	STD. #	FY 1982 $	FY 1981 $	TOTALS	I	II	III	402 $ TO LOCAL
82-01	Reduce Alcohol Related Crashes		147.1						59.2
82-02	Reduce Driver Behavior Related Crashes		763.3						682.9
82-03	Emergency Medical Services		128.4						50.0
82-04	Improve Traffic Records System		140.3						
82-05	Reduce Roadway Related Crashes		325.9						98.8
82-06	Provide Driver and Motorcycle Safety Education		50.7						11.1
82-07	Reduce Pedestrian and Bicycle Crashes		36.0						5.5
82-08	Improve Driver Licensing and Attitude		62.5						
82-09	Increase Use of Occupant Restraints		73.7						
82-10	Improve Management Support		321.2						
	TOTAL FY 1982 HSP		2049.1						
	SUMMARY OF TOTALS (BY ADMINISTERING AGENCY)								
	14+ TOTAL (NHTSA)		1723.2						
	3+ TOTAL (FHWA)		325.9						

Figure I-1 (contd.)

1.2.2 Highway Safety Plan Cost Summary

State: COLORADO

Prepared by: Cordell Smith

HIGHWAY SAFETY PLAN COST SUMMARY

PROGRAM MODULE/PSP NUMBERS & TITLES	ESTIMATED COSTS											
	CURRENT FY 82			FY 1983			FY 1984			FY 1985		
	TOTAL	S/L	FED	TOTAL	S/L	FED	TOTAL	S/L	FED	TOTAL	S/L	FED
82-01 (Alcohol)	182.7	35.6	147.1	201.0	39.2	161.8	221.1	115.9	105.2	243.2	127.5	115.7
82-02 (Police Traffic Services)	1,279.6	516.3	763.3	1,407.6	567.9	839.7	1,548.4	688.9	859.5	1,703.3	757.8	945.5
82-03 (Emergency Medical Services)	133.7	5.3	128.4	147.1	5.8	141.3	161.8	21.7	140.1	178.0	23.9	154.1
82-04 (Traffic Records)	147.0	6.7	140.3	161.7	7.4	154.3	177.9	30.5	147.4	195.7	33.6	162.1
82-05 (Roadway)	426.4	100.5	325.9	469.0	110.6	358.4	515.9	140.1	375.8	567.5	154.1	413.4
82-06 (Driver and Motorcycle Safety Education)	58.6	7.9	50.7	64.5	8.7	55.8	71.0	35.5	35.5	78.1	39.0	39.1
82-07 (Pedestrian and Bicycle Safety)	42.4	6.4	36.0	46.6	7.0	39.6	51.3	28.6	22.7	56.4	31.4	25.0
82-08 (Driver Licensing)	73.7	11.2	62.5	81.1	12.3	68.8	89.2	33.9	55.3	98.1	37.3	60.8
82-09 (Occupant Restraints)	86.3	12.6	73.7	94.9	13.9	81.0	104.4	56.8	47.6	114.8	62.4	52.4
82-10 (Planning and Administration)	395.9	74.7	321.2	435.5	232.0	203.5	479.1	479.1	0	527.0	527.0	0
TOTALS	2,826.3	777.2	2,049.1	3,109.0	1,004.8	2,104.2	3,420.1	1,631.0	1,789.1	3,762.1	1,794.1	1,968.0

Figure I-2

1.2.3 Highway Safety Expenditures Summary

DIVISION OF HIGHWAY SAFETY
COLORADO DEPARTMENT OF HIGHWAYS
SUMMARY OF FEDERAL FUNDS EXPENDED AND OBLIGATED
FY 68 through FY 81

Standard(*)	Actual Expenditures FY 68-75	FY 76	FY 77	FY 78	FY 79	FY 80	FY 68-80 Total Expenditures	Funds Obligated FY 81	Grand Total
300	604,857	119,941	110,730	186,417	218,095	320,310	1,560,350	403,600	1,963,950
303	15,252	2,327	7,748	7,742	6,145	18,643	57,857	10,850	68,707
304	1,104,845	74,380	60,369	63,290	93,278	219,092	1,615,254	252,215	1,867,469
305	234,588	87,521	71,369	129,313	85,475	45,388	653,654	83,200	736,854
306	105,497	29,961	-0-	-0-	-0-	-0-	135,458	-0-	135,458
307	345,480	65,324	113,169	99,404	80,346	85,661	789,384	69,800	859,184
308	299,259	175,179	389,831	279,140	230,079	520,688	1,894,176	582,458	2,476,634
310	916,608	162,172	72,056	272,549	273,595	339,773	2,036,753	241,200	2,277,953
311	572,804	116,197	81,170	89,510	283,786	49,506	1,192,973	91,230	1,284,203
314	-0-	27,358	148,585	198,978	177,373	55,553	607,847	79,830	687,677
315	1,064,393	406,160	619,949	421,053	737,147	486,433	3,735,135	514,569	4,249,704
316	-0-	-0-	-0-	-0-	-0-	5,286	5,286	95,000	100,286
317	64,816	50,088	70,088	82,862	81,050	32,085	380,989	54,400	435,389
318	-0-	-0-	-0-	14,365	-0-	-0-	14,365	-0-	14,365
600	-0-	-0-	-0-	-0-	27,224	34,740	61,964	47,000	108,964
609	214,648	122,000	145,643	107,327	109,823	157,700	857,141	153,000	1,010,141
612	81,831	17,894	23,812	6,157	1,551	-0-	131,245	10,000	141,245
613	348,346	97,609	160,003	149,204	213,280	122,859	1,091,301	284,670	1,375,971
614	22,206	4,000	-0-	-0-	-0-	-0-	26,206	-0-	26,206
616	10,360	-0-	-0-	-0-	-0-	-0-	10,360	-0-	10,360
TOTALS	6,005,790	1,558,111	2,074,522	2,107,311	2,618,247	2,493,717	16,857,698	2,973,022	19,830,720

* See reverse side for Titles of Standards

Figure I-3

300 Planning and Administration
303 Motorcycle Safety
304 Driver Education
305 Driver Licensing
306 Codes and Laws
307 Traffic Courts
308 Alcohol in Relation to Highway Safety
310 Traffic Records
311 Emergency Medical Services
314 Pedestrian Safety
315 Police Traffic Services
316 Debris Hazard Control and Cleanup
317 Pupil Transportation Safety
318 Accident Investigation and Reporting
600 Planning and Administration
609 Identification and Surveillance of Accident Locations
612 Highway Design, Construction, and Maintenance
613 Traffic Engineering Studies
614 Pedestrian Safety
616 Debris Hazard Control and Cleanup

1.3 EXECUTIVE SUMMARY

1.3.1 Overview

The FY 1982 Colorado Highway Safety Plan has been developed with an eye to the changes being proposed at the federal level. While the Administration sees certain areas of involvement as more important than others, a premise we can support in general, the specific needs and conditions vary considerably among states and geographic regions.

Progress and needs for involvement in certain areas are different in Colorado from the federal position because of some significant program developments. Therefore, the emphasis, in terms of requested Federal Section 402 support, does not tie necessarily to the recently suggested NHTSA priorities. For example, several Colorado programs have reached a level of sophistication or support so that continuing support from 402 funds are not necessary. It is hoped, in these cases, that 402 grant-in-aid assistance could be used in other areas needing more improvement in Colorado.

Suggested federal categorical funding priorities, which do not follow the original thrust of HSP concepts, have limited the direction for program emphasis and the thrust of expenditures. Thus, true program planning and development cannot be realized or expected in this Highway Safety Plan.

The FY 1982 Colorado Highway Safety Plan, the details of which were contained herein, has been developed to address the needs of Colorado's Traffic Safety system and to reduce motor vehicle crashes.

This plan calls for attacking the traffic safety problems in this system through a program designed to:

- continue the implementation of effective alcohol programs,
- provide more effective traffic enforcement,
- improve the effectiveness of traffic adjudication,
- improve the delivery of Emergency Medical Services,
- upgrade the collection of data, analysis, and identification of problems,
- improve the roadway conditions and environment,
- emphasize the education, training, and improve examination procedures for drivers,
- increase public awareness,
- increase the use of passenger restraint devices,

- coordinate and administer the State's total highway safety efforts,

- improve State and local agency management of traffic safety resources,

- continue to evaluate efficiency and effectiveness of existing traffic safety programs.

1.3.2 Inter-Agency Cooperation

The FY 1982 Colorado Highway Safety Plan will require the involvement of various states, local and private agencies. The plan also calls for increased involvement by numerous community organizations.

The successful implementation of the plan will depend ultimately on inter-agency cooperation. The Division of Highway Safety (DHS) is the designated state highway safety agency and will provide the necessary coordination for all facets of the traffic safety system and those activities related to the implementation of the Highway Safety Plan. The DHS will also continue to formulate current and long range plans in the development programs involving all aspects and components of traffic safety.

1.3.3 Funding Levels

The FY 1982 Highway Safety Plan contains a total program request of $2.0 million. It is anticipated that total federal dollars available for assistance to State and local agencies will be less than the $2.0 million. Priorities will be developed and when the actual amount of funds are established, those programs having the highest priority will receive funding in the upcoming fiscal year.

1.3.4 Highway Safety Plan Concept

The Highway Safety Plan as submitted contains detail on crash trends, significant statewide problems, the state's program emphasis and priorities, legislative needs and planned administrative actions. In addition, the plan also contains the required certificates of compliance and financial data in sufficient detail to satisfy existing federal requirements.

COLORADO DEPARTMENT OF HIGHWAYS	POLICY DIRECTIVE	
	APPLICABLE DIVISION ALL	
SUBJECT: POLICY DIRECTIVE - DIVISION OF HIGHWAY SAFETY		NUMBER: 800
EFFECTIVE: 3/16/78	SUPERSEDES: N/A	ORIGINATING OFFICE: Division of Highway Safety — DISTRIBUTION: 28

PURPOSE

To establish formal written policy that will cover the duties, responsibilities, functions, and activities of the Division of Highway Safety.

AUTHORITY

1. 23 USC, 4, 401-406
2. 24-1-126 (3) (c) CRS 1973
3. 24-42-101/104 CRS 1973
4. 43-5-401 CRS 1973

APPLICABILITY

This Policy Directive applies to the divisions of the Colorado Department of Highways and other state departments, institutions, and agencies, with political subdivisions of the state, and with appropriate citizen groups.

POLICY

It is the policy of the Federal Government (DOT), the State of Colorado, and the Colorado Department of Highways to have a state highway safety agency (SHSA) under the Executive Director, responsible for coordination of all statewide traffic safety activity. The Division of Highway Safety is hereby designated as the SHSA for this state. To that end, the Division of Highway Safety shall:

1. Consult with state departments, institutions, and agencies, with political subdivisions of the state, and with appropriate citizen groups.

2. Formulate current and long range plans and programs involving all aspects and components of traffic safety.

3. Deal with the federal government with respect to federal highway traffic safety legislation, programs, and activities.

4. Coordinate the activities of state departments, institutions, and agencies and of political subdivisions of the state relating thereto.

5. Advise and report to the Executive Director, Governor and the General Assembly on traffic safety plans, operations and programs.

PROCEDURE

To implement the foregoing policy, all Proposed Budgets, Plans are to be submitted to the Highway Commission through the Executive Director for approval and adoption. Traffic safety programs, projects and activities are designed to reduce the death, injury and property damage that result from traffic crashes. In order to carry out the duties and responsibilities herein defined, the Division of Highway Safety shall have the administrative authority and shall maintain the necessary staff and capability to perform the following activities:

1. Plan, coordinate, evaluate, monitor and implement programs in the Colorado traffic safety system.

2. Establish guidelines and procedures under which comprehensive plans and work programs are prepared.

3. Develop and maintain traffic safety program information, research reports, training resources, statewide statistical indicators and public information material.

4. Create and maintain a central source of traffic safety data and information to be used for:

    a. Improvement of traffic safety programs.
    b. Development of management information systems.
    c. Improvement of budgeting techniques.
    d. Financial resource allocation.
    e. Evaluative methodology.

5. Review state and local programs to insure compliance with national and state traffic safety standards, goals and objectives.

6. Measure progress and impact of state and local programs and projects.

7. Establish, maintain and work with traffic safety committees, commissions and organizations involved in the professional and technical aspects of the traffic safety system.

8. Develop an inter-departmental budget that will clearly identify statewide programs and projects that have been developed or will be developed to impact traffic safety systems or subsystems.

9. Develop the procedures whereby departmental and local programs can be coordinated between appropriate federal, state and local agencies and officials.

10. Monitor the effectiveness of legislation in traffic safety areas and develop, coordinate and propose new and/or revised legislation where needed.

11. Develop the necessary operational programs in the Division of Highway Safety for the official and effective application of programs and projects.

12. Administer the federal program established by the National Highway Safety Act.

13. Coordinate activities and functions with similar processes in the Department of Highways.

ADVISORY COMMITTEE - DUTIES

In addition to the duties authorized by CRS 24-42-102, the Governor's Traffic Safety Advisory Committee shall advise and consult with the Executive Director, the Highway Commission, the Governor and the General Assembly.

The Division of Highway Safety shall furnish necessary staff and financial support to the Advisory Committee in order to carry out these activities and duties.

IMPLEMENTATION

This policy directive shall be effective immediately and shall be implemented by the Division of Highway Safety. Procedural Directives shall be promulgated to establish the required activities for effective implementation of this Policy Directive.

EXECUTIVE DIRECTOR

SECTRETARY, HIGHWAY COMMISSION

SECTION II

2.0 Problem Analysis

2.1 Introduction

2.1.1 Statewide Analysis
2.1.2 Rural/Urban Statewide Crashes
2.1.3 Crashes in Municipalities
2.1.4 Crashes in Counties
2.1.5 Crashes in Planning and Management Regions

2.2 Factor Related Analysis to Support Highway Safety Programs

2.2.1 Impact Problems
2.2.2 Mandated Programs
2.2.3 Systems Support Problems

2.0 PROBLEM ANALYSIS

2.1 INTRODUCTION

This section of the Highway Safety Plan (HSP) summarizes analyses related to the various aspects of the highway safety problem in Colorado, as illustrated in Table 2.1.1 on the following page. Additional detailed analyses needed to clarify or illuminate specific problem or recommended countermeasures are included with the "problem statements" in Section 3 where appropriate. Problem solutions comprised of countermeasures specified in this HSP were devised by management on the basis of past experience with such programs, and on the basis of both internal and external analyses, available to the Colorado Division of Highway Safety.

Many statistical techniques have been applied in the analyses. These support recommendations to management for problem identification and countermeasures specification. Chi Square tests, T-tests, regression analyses, time series analyses, and various forms of normalization have been used. Direct evidence of the use of such techniques does not always appear in this document because the Highway Safety Plan is designed to summarize rather than to present the detailed analyses undertaken.

The diagram in Table 2.1.1 was developed to assess the completeness of coverage of the highway safety problem in Colorado and for the planning and specification of programs in this Highway Safety Plan. Analysis related to each of the problem areas specified in Table 2.1.1 has been carried out to the extent feasible.

TABLE 2.1.1

PROBLEM IDENTIFICATION

IMPACT PROBLEMS	Alcohol	Involvement in Fatal Crashes Alcohol Related Crash Trends
	Youthful Driver	Youthful Driver Crash Involvement Youthful Driver Education
	Repeat Offender	Driver Error Factor Repeat Offender Involvement
	Motorcycle	Motorcycle Crash Trend
	Roadway	Road Deficiencies Hazardous Location Traffic Engineering
	Miscellaneous Vehicle and Pedestrian	Truck Pedacycle Passenger Cars Defective Vehicle Pedestrian
	Emergency Medical Services	Injury Severity Standardization of Services
MANDATED PROGRAMS	Fifty-five NMSL	Speed Related Crashes Reporting and Personnel Deployment
	Passive/Occupant Restraint Device	Usage by Occupants Public Support Data
	Pupil Transportation	School Bus Crashes Bus Driver Training
SYSTEM SUPPORT PROBLEMS	Records	EMS Response Time Usage of Protective Devices Traffic Driver Improvement Education Effectiveness
	Training	Judges, District Attorneys Law Enforcement Officials Treatment Personnel
	Legislation	Protective Devices Restraint Devices
	Energy Conservation	Enforcement Vehicles Enforcement Strategy
	Public Commitment and Support	Protective Devices Alcohol Fifty-five NMSL Emergency Communication 911

Since the inception of highway safety program efforts in 1967, the major highway safety problems have been well defined. The National Highway Traffic Safety Administration has designated the general problem areas in Volume 102, the Highway Safety Plan, as:

- Pedestrian Crashes
- Motorcycle Crashes
- Pedacycle Crashes
- Passenger Car Crashes
- School Bus Crashes
- Truck Crashes
- Problem Drivers
- Roadside and Roadway Hazards
- Alcohol Involvement
- Youth Involvement
- Defective Vehicle Involvement
- Suspended/Revoked Driver Involvement
- Safety Belt Usage
- Speed Involvement

Consequently, the analyses of highway safety problems within the last few years have identified more specific problems within these general areas for which countermeasures can be developed.

Problem analyses depend on the data available, and the Colorado Division of Highway Safety is not the caretaker of the State's crash reports, driver licensing records, or vehicle registration records; consequently, the basic data for these analyses are gathered from numerous sources (see Table 2.1.2 following). While all data compiled from these sources are valid, care must be exercised when using data from different sources because basic definitions, categories, and assumptions change with the different data bases used.

Because of the ease of access, and the timeliness and completeness of the data, the Fatal Accident Reporting System (FARS) is frequently used as a source in the analysis of impact problems. FARS contains only information on fatal crashes, which limits its usefulness in some problem analyses. However, the amount and variety of data collected in FARS (e.g., age, blood alcohol concentration), and the ease with which the data is retrieved using the Table Producing Language (TPL), make the system an invaluable tool.

TABLE 2.1.2

RESOURCES FOR HIGHWAY SAFETY DATA

Vehicle Registrations, Driver Licensing, Crash Reports - Department of Revenue, Division of Motor Vehicles.

Vehicle Miles Traveled - Highway Department, Division of Transportation Planning.

Other Crashes, Standard Summary - Department of Revenue.

Driver Licensing Information - Department of Revenue and Highway Department, Division of Transportation Planning.

55 MPH Information - Highway Department, Division of Highways

Fatal Crash Information for FARS - State Patrol, Other Law Enforcement Agencies, Department of Revenue, Motor Vehicle Division.

The following table illustrates Historical Crash Trends in Colorado as well as trends in those variables most clearly associated with the number of Highway Crashes. Subsequent sections will develop in-depth analysis of these trends.

TABLE 2.1.3

HIGHWAY SAFETY CRASH RELATED VARIABLES

Basic Variables:	1975	1976	1977	1978	1979	1980
Motor Vehicle Registrations	1,998,000	2,303,000	2,246,000	2,402,000	2,717,000	2,780,000 (est.)
Licensed Drivers	1,690,000	1,774,000	1,973,000	2,006,000	2,024,000	2,048,000
Vehicle Miles Traveled (millions)	16,538	17,637	18,551	19,817	19,736	19,660
Population	2,541,000	2,575,000	2,625,000	2,664,000	2,800,000	2,878,000
Crash Variables:						
Traffic Fatalities	591	636	705	713	692	709
Fatal Crashes	517	556	620	616	619	625
Fatalities Per 100 Million VMT	3.57	3.66	3.80	3.60	3.50	3.61
Injuries	31,038	31,970	35,737	37,611	37,120	37,383
Injury Crashes	20,444	21,289	23,634	25,041	25,321	25,520
Property Damage Only Crashes	89,812	89,416	93,948	105,153	102,825	94,448
ALL CRASHES	110,773	111,258	118,202	130,810	128,765	120,593

Source: Department of Revenue, Department of Highways

2.1.1 Statewide Analysis

Colorado's crash rates normalized by vehicle miles traveled have varied only slightly since 1975. Table 2.1.1.1 below shows the percentage change in various categories between successive years.

TABLE 2.1.1.1

PERCENTAGE CHANGE IN
CRASH, FATALITY, AND INJURY RATES PER
VEHICLE MILE TRAVELED

Years	Percent Change in Fatal Crash Rate	Percent Change in Fatality Rate	Percent Change in Injury Crash Rate	Percent Change in Injury Rate
1975-76	+2.24%	+2.52%	-0.84%	-1.94%
1976-77	+4.38%	+3.83%	+3.93%	+4.67%
1977-78	-6.89%	-5.26%	-0.82%	-1.48%
1978-79	+0.64%	-2.78%	+1.35%	-1.09%
1979-80	+3.22%	-3.14%	+1.33%	+1.28%

Source: Standard Summary

In Colorado there has been a gradual decline of the State death rate (per 100 million VMT) from 5.90 in 1966 to 3.61 in 1980. Of the 13 western states, Colorado had the fifth lowest death rate per 100 million VMT in 1978 according to the NHTSA 1979 55 MPH Fact Book.

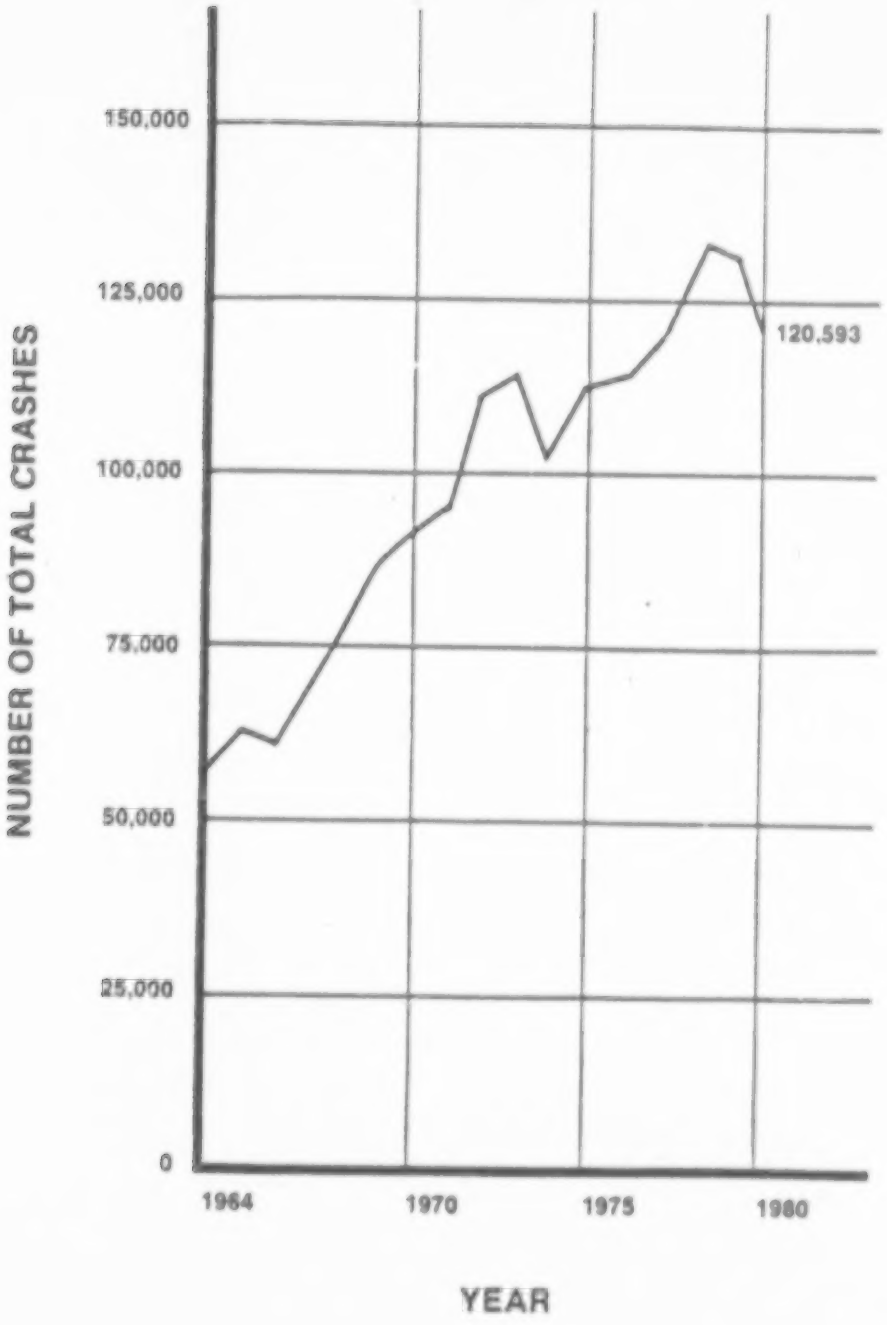
Figures II-1 through II-7 graphically illustrate crash statistics and rates per vehicle mile travel that have been previously discussed in this Section 2.1.1.

2.1.2 Rural/Urban Statewide Crashes

The statewide Colorado crash statistics have been broken down by urban vs. rural for comparative purposes. The table below shows that while urban and rural driving is relatively close in terms of driver exposure as measured by vehicle miles traveled (VMT), (48.3 percent rural vs. 51.7 percent urban) urban driving leads in all crashes and injury crashes, while rural driving results in more fatal crashes.

FIGURE II.1

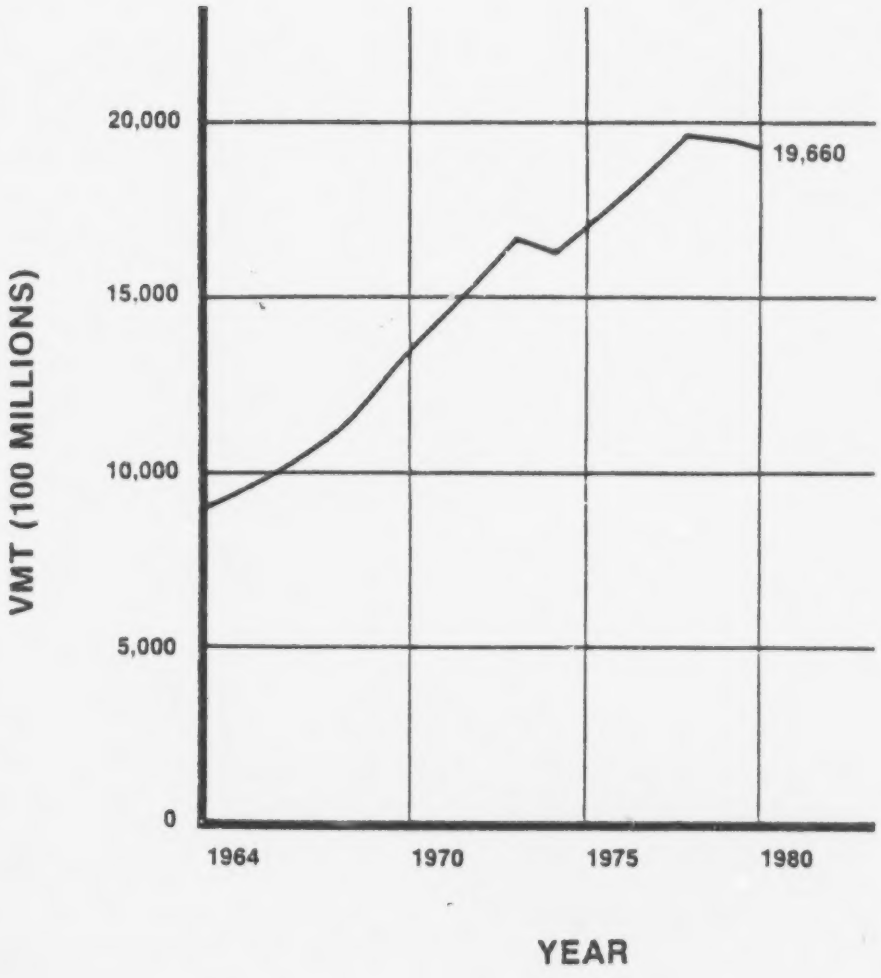
TOTAL CRASHES IN COLORADO FROM 1964 THROUGH 1980



Source: Standard Summary

FIGURE II.2

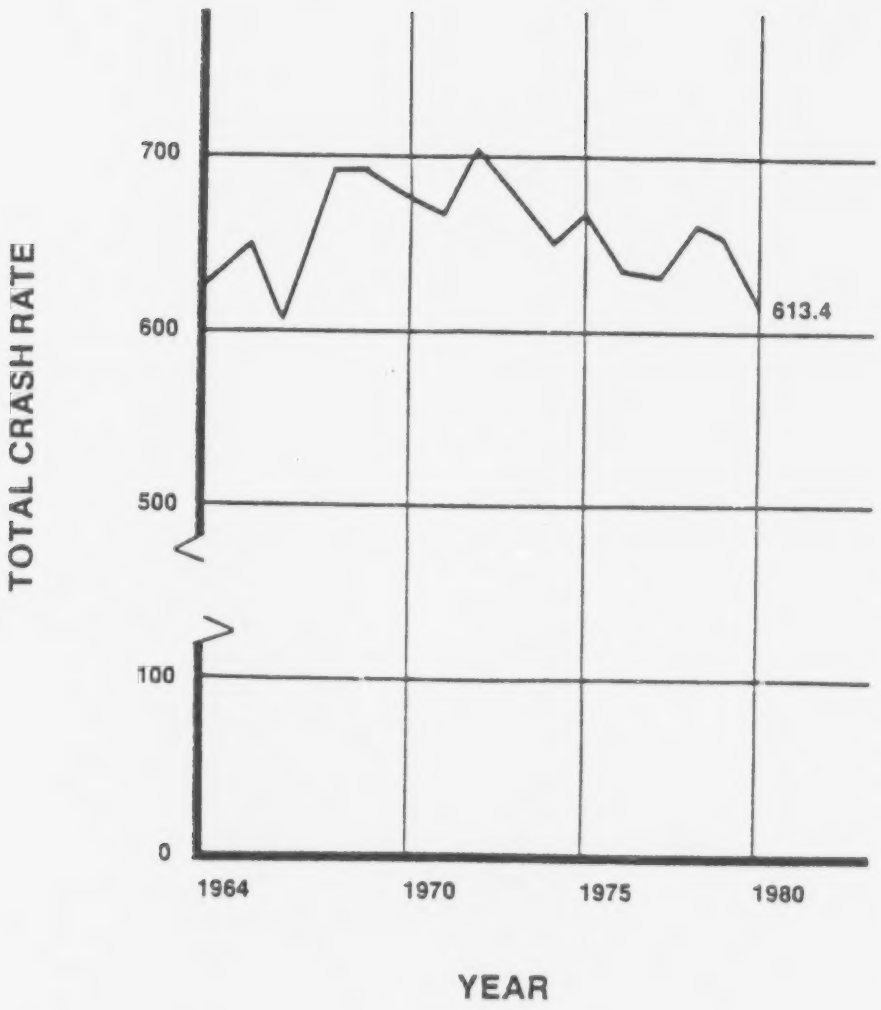
VEHICLE MILES TRAVELED (VMT) IN COLORADO FOR 1964 THROUGH 1980



Source: Standard Summary

FIGURE II.3

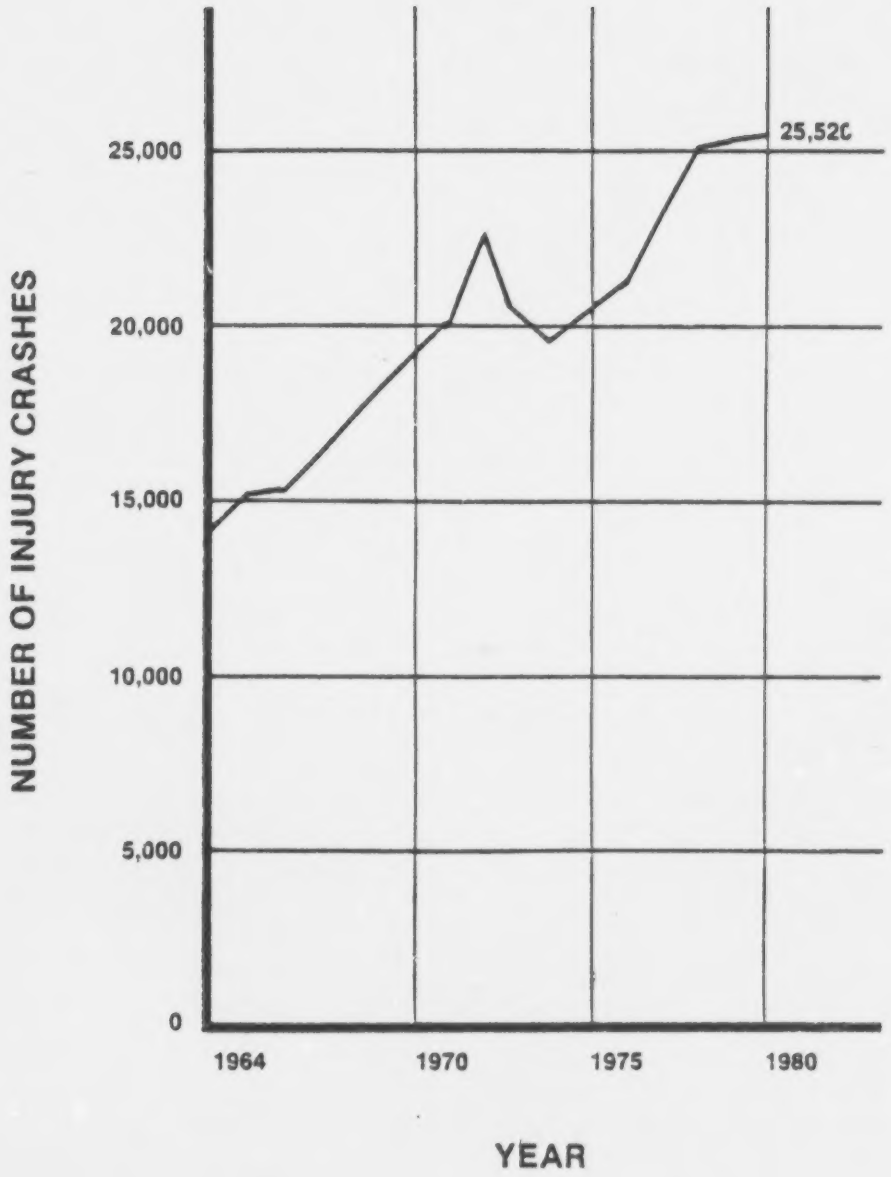
TOTAL CRASHES IN COLO. PER 100 MILLION VMT FOR 1964 THROUGH 1980



Source: Standard Summary

FIGURE II.6

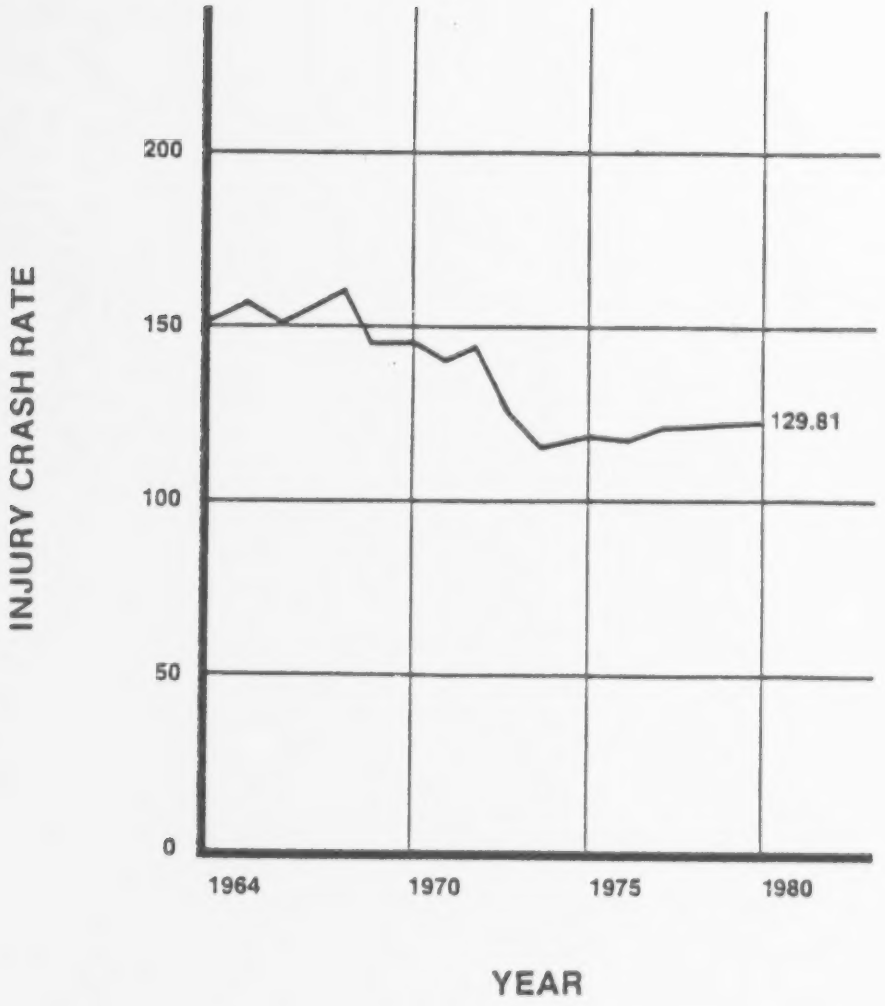
INJURY CRASHES IN COLORADO FOR 1964 THROUGH 1980



Source: Standard Summary

FIGURE II.7

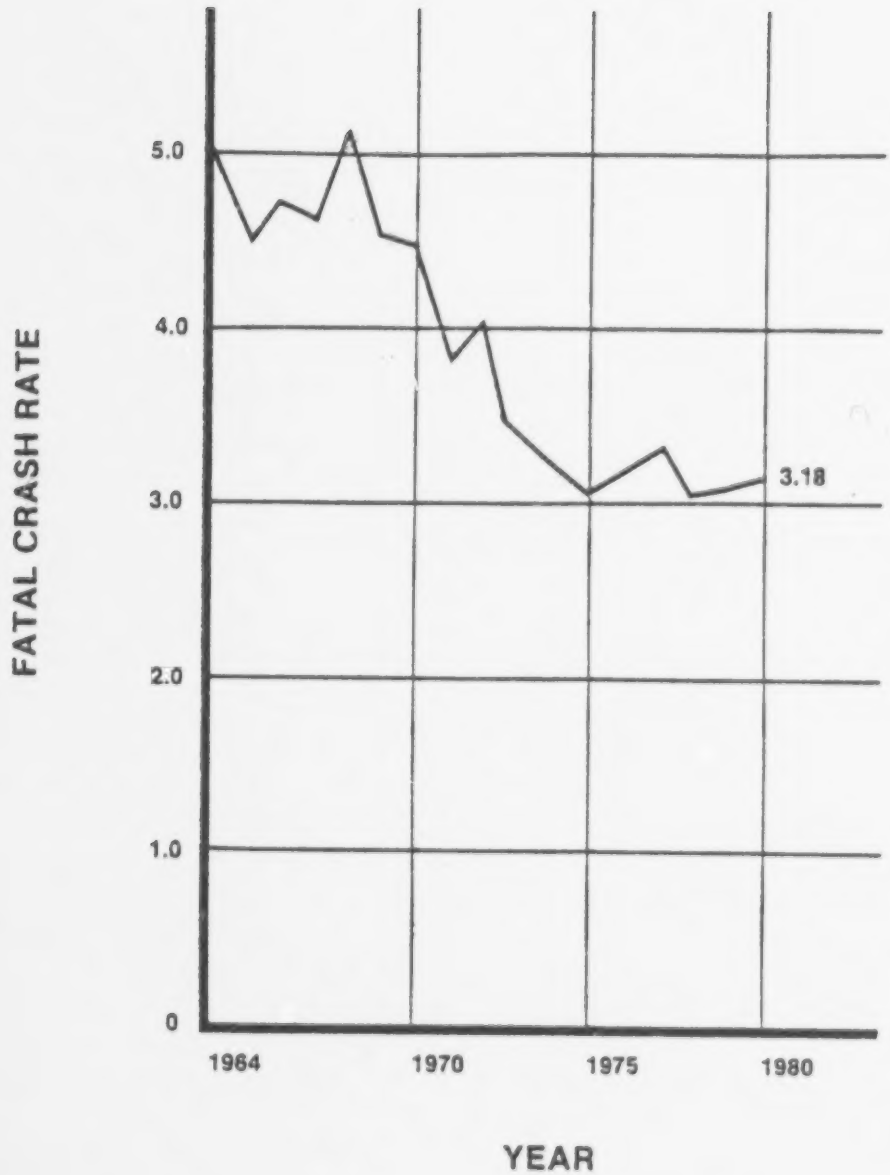
INJURY CRASHES IN COLORADO PER 100 MILLION VMT FOR 1964 THROUGH 1980



Source: Standard Summary

FIGURE 11.5

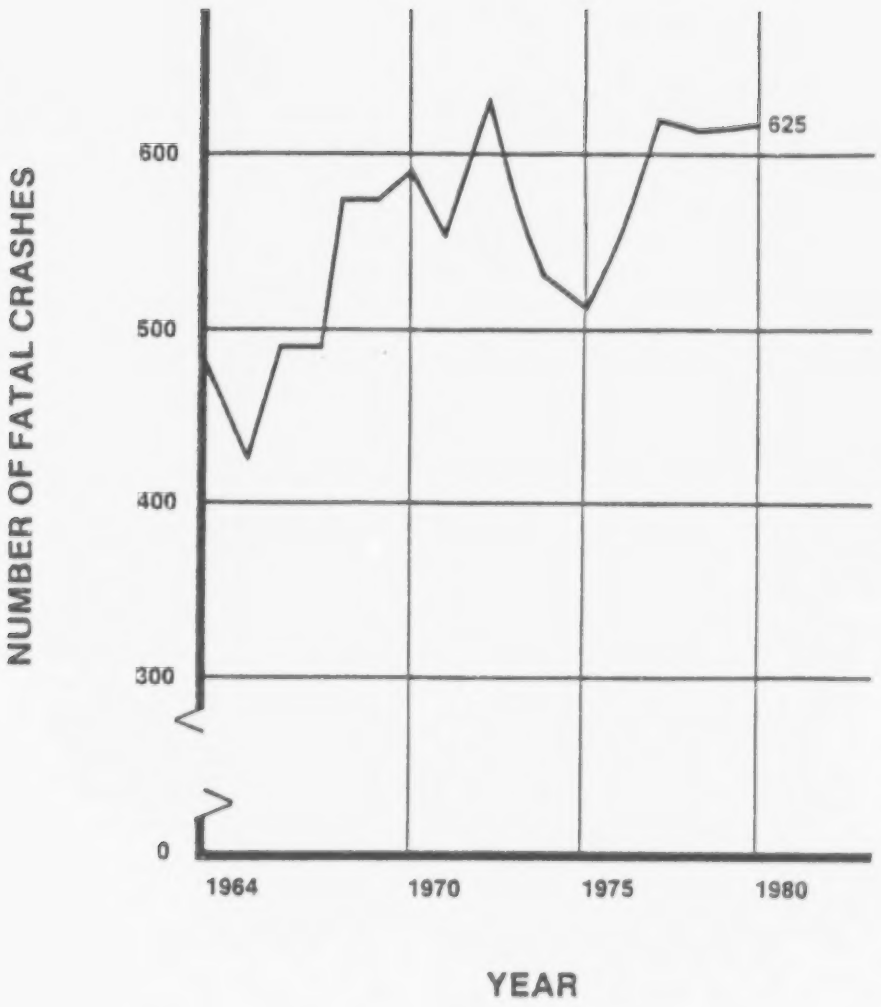
FATAL CRASHES IN COLORADO PER 100 MILLION VMT FOR 1964 THROUGH 1980



Source: Standard Summary

FIGURE II.4

FATAL CRASHES IN COLORADO FOR 1964 THROUGH 1980



Source: Standard Summary

TABLE 2.1.2.1

PERCENT OF URBAN VS. RURAL CRASHES 1979 & 1980

Driving Type	All Crashes		Injury Crashes		Fatal Crashes		Exposure(VMT)	
	1979	1980	1979	1980	1979	1980	1979	1980
Rural	31.56	31.06	32.57	33.69	68.34	67.52	47.46	48.32
Urban	68.44	68.94	67.43	66.31	31.66	32.48	52.54	51.68
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Source: Standard Summary

During Calendar Year 1979, Colorado experienced a reversal in historical crash trends in that there was an increase in serious (fatal and injury) crashes on Rural Roads and a decrease in serious Urban crashes. This new trend appears to have continued during 1980 as the following table illustrates:

TABLE 2.1.2.1 Cont.

FATAL AND INJURY CRASHES (COMBINED)
URBAN VS RURAL ROADS

Urban	1979	1980
Number	17,268	17,125
Percent	66.6%	65.5%
Rural		
Number	8,672	9,020
Percent	33.4%	34.5%

This new trend could be associated with several factors: an increase in VMT's on rural roads, a decrease in VMT's on urban roads, a growing disregard for the 55 NMSL by Colorado motorists.

The table on the following page illustrated these trends through the use of crash rates.

TABLE 2.1.2.2

FATAL AND INJURY/URBAN AND RURAL CRASH RATES - 1976 THROUGH 1980

Year	Urban Fatal Crash Rate	Rural Fatal Crash Rate	Urban Injury Crash Rate	Rural Injury Crash Rate
1980	2.00	4.44	166.52	90.53
1979	1.89	4.52	164.64	88.06
1978	2.20	4.11	173.76	69.74
1977	2.15	4.53	182.50	72.70
1976	2.02	4.31	165.99	73.32

Source: Department of Revenue and Division of Highways

When crash rates are compared, it is uncertain whether a new trend was in fact begun or whether 1979 was an aberration. As has been true historically, both the fatal and injury crash rates increased in urban areas while the rural fatal crash rate declined. (The latter is difficult to answer because of wide year to year variations in the rates.)

When new rates are calculated for the two classes of crashes combined, both roadway systems are evidencing a deteriorating crash situation. (Urban Fatal and Injury Rate 41.2% Rural Fatal and Injury Rate 42.6%). Further analysis, over time, will be necessary to determine whether or not new trends have been established in the manner of Urban/Rural crashes and to what extent these trends will require a reallocation of resources.

2.1.3 Crashes in Municipalities

All municipalities with a population of over 5,000 persons were ranked using the following categories:

- total crashes/1,000 persons,
- injury crashes/1,000 persons,
- total crashes/100 miles of roadway,
- injury crashes/100 miles of roadway, and
- economic loss/capita.

This yielded 19 municipalities that appear in the top ten of at least one category based on 1979 data. The table on the following page is a summary ranking of municipalities, which shows the number of categories in which these cities appear.

TABLE 2.1.3.1.

NUMBER OF CATEGORIES ON WHICH
MUNICIPALITY APPEARS IN TOP TEN LIST

Municipality	1979	1978
1. Denver	5	5
2. Sheridan	5	5
3. Wheat Ridge	4	5
4. Colorado Springs	4	4
5. Steamboat Springs	4	4
6. Westminster	4	4
7. Pueblo	3	4
8. Commerce City	3	3
9. Grand Junction	3	3
10. Englewood	3	2
11. Greeley	3	2
12. Durango	2	4
13. Craig	2	3
14. Cortez	2	2
15. Federal Heights	2	1
16. Lakewood	2	1
17. Sterling	2	1
18. Longmont	1	2
19. Cherry Hills Village	1	1

Source: Department of Revenue

Nine of the cities listed above are located in the Denver metro area. Fourteen of the cities are located along the front range (eastern slope) of Colorado. The remaining five municipalities comprise the major population centers of the western slope of Colorado.

In the table on the following page, ten Colorado municipalities, <u>including</u> those with less than 5,000 persons, are ranked by the number of crashes per 1,000 people. It can be seen that after introducing smaller population centers, only three municipalities with a population in excess of 5,000 persons remain on the list (Steamboat Springs, Durango, and Grand Junction).

TABLE 2.1.3.2

MUNICIPALITIES WITH THE MOST CRASHES PER 1,000 POPULATION

Municipality	Total Crashes/1,000 Persons
1. Vail	266.12
2. Aspen	207.14
3. Glendale	175.66
4. Glenwood Springs	157.04
5. Steamboat Springs	160.76
6. Estes Park	133.75
7. Greenwood Village	125.47
8. Grand Junction	121.72
9. Breckenridge	117.05
10. Durango	114.12

Source: Department of Revenue

Most of the municipalities listed above have characteristics that are somewhat different from other municipalities in Colorado. For example, Glendale is completely surrounded by Denver and has more liquor outlets (based on square/miles or population) than any municipality in the State. There is a tremendous influx of nonresidents who are attracted to the bars and restaurants during off-work hours, especially on weekends. Seven of the other cities listed are resort/ski areas that attract many nonresidents. No change in ranking occurs when the frequency of occurrence of fatal and injury crashes is considered.

2.1.4 Crashes in Counties

The analysis of crash data by county reveals a different picture than was derived from the analyses by municipality. Seven rural counties, each with a total population greater than 5,000 persons, appear in the top ten in terms of the frequency of occurrence.

TABLE 2.1.4.1

COUNTIES RANKED BY CRASH FREQUENCY
(FATAL AND INJURY CRASHES/100 CRASHES)

	POPULATION GREATER THAN 5,000		ALL COUNTIES	
Rank	County	Frequency Index	County	Frequency Index
1.	Douglas	28.08	Hinsdale	34.38
2.	Park	26.87	Jackson	31.03
3.	El Paso	24.50	Gilpin	29.03
4.	Huerfano	23.64	Custer	28.30
5.	Teller	23.50	Douglas	28.08
6.	Pueblo	23.23	Costilla	27.62
7.	Grand	23.02	Park	26.87
8.	Clear Creek	22.99	San Juan	25.71
9.	Elbert	21.80	El Paso	24.50
10.	Weld	20.83	Huerfano	23.64

Source: Department of Revenue

When all 63 counties are considered, the dominance of rural counties becomes even more pronounced in that nine of the ten counties with the highest incidence of serious crashes are rural. This may be a result of crashes occurring on rural roads, which usually have higher speed limits. The association between high speed and increased injury severity has been frequently documented.

Two definite geographical problem areas appear when the analyses of cities and counties are integrated. El Paso County, which includes the City of Colorado Springs and Weld County, which includes the City of Greeley, are high in both comparisons.

When the crash data is normalized per 100 miles of roadway, the front range is again heavily represented in the highest ten counties as the following table shows:

TABLE 2.1.4.2.

TEN HIGHEST COUNTIES IN TOTAL CRASHES/
100 MILES OF ROADWAY

County	Crashes/100 Miles of Roadway
Denver	1809.29
Arapahoe	658.31
Jefferson	609.14
Adams	468.43
El Paso	340.08
Pitkin	339.05
Larimer	275.57
Clear Creek	266.47
Pueblo	255.34
Summit	253.86

Source: Department of Revenue

The two rural counties on the list, Pitkin County (the location of Aspen) and Summit County (the location of Arapahoe, Breckenridge, Copper Mountain, Keystone, and Loveland ski areas) have large numbers of nonresident tourists and skiers.

2.1.5 Crashes in Planning and Management Regions

Approximately 70 percent (71.2% in 1980, 73.0% in 1979 and 70.9% in 1978) of all fatal crashes in Colorado occurred in the five Planning and Management Regions that have populations of over 100,000 persons (i.e. Region 2, 3, 4, 7, and 11). These five regions comprise approximately 86 percent of the state's population and 43 percent of all the state's roadway miles. Crashes resulting in injuries occurring in these five regions represent nearly 90 percent of the total injury crashes in the State. While these areas have a lower rate of fatal crashes, which is consistent with other analyses, the high density of traffic on roads in these regions result in a greater rate of injury crashes. Rates are based on population in this case. VMT is unavailable by Planning and Management Region.

Figure II-8 shows the number of fatal crashes for each Planning and Management Region during the year 1980.

Each of the five Planning and Management Regions previously mentioned contain one or more large urban areas. Using the number of fatal crashes per 100 injury crashes as a severity index, the Planning and Management Regions are ranked by crash severity in the table on the following page.

TABLE 2.1.5.1

CRASH SEVERITY BY PLANNING AND MANAGEMENT REGION
1980 DATA

Region	Severity*	Counties	Urban/Rural
6	8.27	Crowley, Kiowa, Otero, Bent, Prowers, Baca	R
8	5.95	Saguache, Mineral, Rio Grande, Alamosa, Conejos, Costilla	R
10	5.74	Delta, Gunnison, Montrose, San Miguel, Ouray, Hinsdale	R
1	5.69	Morgan, Washington, Logan, Sedgwick, Phillips, Yuma	R
9	5.66	Dolores, San Juan, Montezuma, La Plata, Archuleta	R
5	5.36	Elbert, Lincoln	R
12	5.07	Routt, Jackson, Grand, Eagle Summit, Pitkin	R
13	4.32	Kit Carson, Cheyenne, Lake, Chaffee, Fremont	R
11	3.78	Moffat, Rio Blanco, Garfield, Mesa	U/R
2	3.50	Larimer, Weld	U/R
7	3.03	Huerfano, Las Animas, Pueblo	U/R
4	1.76	Park, Teller, El Paso	U/R
3	1.62	Boulder, Denver, Adams, Arapahoe, Douglas, Jefferson, Clear Creek, Gilpin	U/R

* Severity: Number of Fatal Crashes Per 100 Injury Crashes

Source: Department of Revenue

Rural roadway crashes are more severe as indicated originally in Section 2.1.2. The data presented in Table 2.1.5.1 illustrates that it is possible to refine that statement to implicate roadway and driving conditions, and possibly speed, when one examines the geographical implications of the rank order specified.

Section 2.1 has dealt with statewide crash data. The aggregate data analysis referred to in this section was carried out to detect trends (if any) and specify crash data on the basis of a geo-political breakdown. A summary of the analysis related to the problems and factors specified in Table 2.1.1 follows.

2.2 FACTOR RELATED ANALYSIS TO SUPPORT HIGHWAY SAFETY PROGRAMS

2.2.1 Impact Problems

2.2.1.1 Alcohol Involvement

Since 1974, when the Colorado Board of Health Rules and Regulations were adopted establishing procedures requiring blood alcohol tests on all drivers and pedestrians killed in vehicular crashes, alcohol has been a reported factor in nearly one half of all fatal crashes. [1/] There is limited research concerning the exposed population but it is assumed that a distribution of blood alcohol concentration (BAC) levels among all drivers at various points in time would yield miniscule percentages over 0.05 percent. This implies a high correlation between abusive drinking and crashes involving fatalities.

The following table shows that alcohol involvement in fatal crashes as a percent of total fatal crashes has remained about 50 percent (with what appear to be some random variations) since 1975, which was the first full year that data were available.

TABLE 2.2.1.1.1

ALCOHOL INVOLVEMENT IN FATAL CRASHES

Year	Alcohol Related Fatal Crashes	Percent Alcohol Related Fatal Crashes/ Total Fatal Crashes
1980	318	50.9
1979	296	47.8
1978	304	49.4
1977	291	46.9
1976	249	44.8
1975	243	47.0

Source: Division of Highway Safety

County statistics for 1979 have been examined to ascertain the counties where more than 50 percent of all crashes are alcohol related. This permits countermeasures to be applied more directly to the alcohol/driving problem.

1/ A crash is defined as alcohol related if one or more drivers or an involved pedestrian have a blood alcohol concentration (BAC) in excess of 0.05 percent.

Age distributions of drinking drivers involved in Colorado fatal crashes have also been examined to help profile the abusive drinker/driver and select appropriate countermeasures. That analysis shows that the percentage of drivers who were in fatal crashes had BAC levels greater than 0.5 percent, and that were between the ages of 21 and 24, were almost three times more abundant than that age group in the licensed driving population of a whole.

Another attempt to pinpoint countermeasures uses an analysis of data related to arrest on alcohol/driving related charges, adjudication, and referral to treatment.

In Colorado there is no requirement for law enforcement agencies to report traffic arrest activity, including DUI/DWAI, to a central data file. As a result, statewide arrest data are unavailable. Reporting of arrest activity is a subject requiring additional attention in the future.

Section 42-4-1202(5), CRS 1973 as amended, requires the establishment of an Alcohol and Drug Driving Safety Program in each Colorado Judicial District. Data resulting from the research design of this program has made available new demographic information on convicted DUI/DWAI offenders.

All persons entering the Alcohol and Drug Driving Safety (ADDS) Program reflect a similar age distribution to that found for drinking drivers involved in Colorado fatal crashes.

An analysis of ADDS Program representation by sex indicates that women are more likely to enter the program with a crash related offense as opposed to a DUI/DWAI conviction alone.

2.2.1.2 Youthful Drivers

Youthful drivers, age 16 to 24, represented 22 percent of all licensed drivers in 1980, but comprised 35 percent of all drivers involved in crashes on Colorado's roads. This is a bias that exists in fatal crashes and injury crashes, where youthful drivers represented 34 percent and 36 percent of all drivers involved in these crash types. The table on the following page illustrates how the youthful driver compares to other age groups in all crashes. The index in that table was derived by establishing the percentage of licensed drivers in crashes in 1980 and a similar percentage for each age category. The age group

percentage was divided by the total percentag. to establish the index for each age category. An index of 1.62 for 16 year old drivers means that 1.62 times as many 16 year olds were involved in crashes in 1980 as would be expected if crashes were distributed in proportion to the total population of licensed drivers.

TABLE 2.2.1.2.1

DRIVERS BY TOTAL CRASHES - 1980

Age of Driver	Number of Crashes*	Number Licensed Drivers	Index*
16	6,617	43,393	1.62
17	7,529	44,425	1.81
18-19	16,447	95,826	1.83
20-24	37,454	275,871	1.45
25-34	54,986	608,221	.96
35-44	25,803	349,058	.79
45-54	16,165	254,029	.68
55-64	11,326	207,999	.58
65 and over	14,607	169,587	.92
TOTALS	192,026	2,048,409	

* Does not add because crashes involving drivers under 16 have been excluded.

Source: Standard Summary

An analysis of types of violations by youthful drivers (16-25 years old) indicates that they are almost twice as likely as the total driving population to be ticketed for careless driving, speeding (in excess of 20 MPH over the posted speed limit), or operating a vehicle without a license. Other categories of serious violations also show greater involvement of youthful drivers, but not to the extent of these three.

Youthful drivers are a special problem group in the total driver population. Special attention toward changing youthful driver behavior is clearly warranted.

2.2.1.3 Repeat Offenders

Drivers who have one or more violations appear in 56 percent of fatal crashes, yet they comprise only 16 percent of the total driving population in Colorado. Consequently, of those drivers in fatal crashes, 3½ times as many have previous violations as would be expected if fatal crashes were distributed randomly among all drivers.

This problem has been investigated extensively by the Colorado State Auditor, (with the assistance of the Department of Revenue and the Division of Highway Safety) in the form of a Driver Improvement Performance Audit. Warning letters were issued, or preliminary hearing conducted, for drivers in selected urban and rural areas who had accumulated half the number of points required for driver license suspension. After analysis, the evaluation of driver behavior indicated drivers who received warning letters or attended a preliminary hearing had significantly fewer traffic crashes after one year of driving than did drivers not contacted. Warning letters and preliminary hearings were found to be cost effective. The audit was completed in May 1977 and is available from the Colorado Department of Revenue.

2.2.1.4 Motorcycle Crashes

Motorcycles represent approximately five percent of the registered motor vehicles in the State but appear in 12 percent of the fatal crashes, and 8.3 percent of all injury crashes. They are underrepresented in property damage crashes (0.5 percent) and total crashes (2.1 percent). The high injury and fatality rates can be attributed to non-use and lack of protective devices, poor awareness on the part of other vehicle operators, limited ability of other drivers to see motorcycles, inexperienced operators, and insufficient training.

The number of motorcycle registrations and number of motorcycle fatalities have increased, while helmet usage in fatal crashes has dropped since 1978. General helmet usage, since 1976, has remained fairly stable for motorcycle drivers: 48.5 percent usage in 1978 and 51.5 percent usage in 1979. The reader is referred to the report "Impact of Motorcycle Helmet Usage in Colorado" by Dare, Owens, and Krane; September 1978, available at the Division of Highway Safety, Colorado Department of Highways. This report provides additional data and more detailed analysis of the safety helmet problem.

2.2.1.5 Roadway Element

Roadway programs are designed to reduce injury severity resulting from motor vehicle crashes by making the roadway environment more forgiving, and supporting efforts to reduce the frequency of crashes resulting from roadway deficiencies.

Accurate and appropriate data are not always available for analyses of all roadway systems in Colorado. However, 1979 data show 39 percent of all fatal crashes occurring on State highways involved a vehicle leaving the traveled way and striking a roadside appurtenance. Over half of these involved trees, embankments, and fences. Motorists striking guardrail and bridge railing accounted for another 34 percent. Combined these appurtenances were factors in 87 percent of all fatal crashes occurring when vehicles left the traveled way. The extent of the problem in terms of impact has been identified; however, there exists a serious system problem in that these and other crashes are not fully investigated. As a result, those roadway factors that contribute to the pre-crash condition cannot be identified fully.

2.2.1.6 Bicycles

From 1975 through 1980, the average number of bicycle riders killed in crashes with motor vehicles each year in Colorado is 8.0. Significant statistical relationships are difficult to determine when the annual numbers are so small. Consequently, the Division of Highway Safety has used injury crash data in its attempt to better clarify and delineate the bicycle/motor vehicle crash problem.

An analysis of bicyclists injured by age group shows that the five to 34 year old age group accounts for more than 90 percent of those injured. This is expected, since the apparent users of bicycles are from this age group. The age distribution of those bicycle riders in injury crashes shows that three times the number of five to 14 year olds are involved in such crashes as would be expected if these crashes were distributed randomly by age. Only 1.69 times the number of 15 to 24 year olds are so involved.

2.2.1.7 Pedestrians

Pedestrian injuries in crashes with motor vehicles show more young people 0-14 years of age than would be expected on the basis of their proportion of the Colorado population. The age group 15 to 24 years old and over 65 years old are also more frequently involved than would be expected on the basis of their proportion of State population, although to a lesser extent.

A geographical analysis of the pedestrian problem has also been undertaken. This has shown the problem to be more serious in heavily urbanized areas.

2.2.1.8 Passenger Cars

The most satisfactory available proxy for crash exposure of specific vehicle types is percentage of total registrations. Such a normalization indicates that in fatal crashes and total crashes, passenger cars are underrepresented. The number of passenger cars involved in injury crashes is approximately what would be expected if such crashes were distributed uniformly across all vehicle registrations. Although the adequacy of the proxy for exposure is questionable, the analysis indicated that injuries in passenger car crashes should be analyzed further (see summary of restraint usage analysis in Section 2.2.2.2).

2.2.1.9 Trucks

Truckers are overrepresented by 17 percent in fatal crashes compared to their proportion of total vehicle registrations. Trucks do not appear in injury and property damage crashes in proportion to their registration. Further analysis is needed before any specific countermeasures are considered.

2.2.1.10 Defective Vehicles

Although the problem of defective vehicles is recognized, accurate statistics are not presently maintained concerning vehicle defects as contributory factors in highway crashes. A moratorium and attempt to repeal the vehicle-in-use safety inspections may complicate this problem further.

2.2.1.11 Suspended/Revoked Drivers

Little analysis has been carried out on this problem, probably because the implementation of specific

countermeasures would be difficult. However, the problem is not unknown. Operating a vehicle without a license was one of the top ten violations in Colorado in 1979, with nearly 20,000 convictions that year. The number of these convictions that involved drivers who were suspended or revoked is unknown.

An analysis of fatal crashes shows 4 percent of the driver licenses were suspended or revoked prior to the fatal crash. An additional 10 percent did not have a valid operator's license at the time of the fatal crash.

2.2.1.12 Emergency Medical Services

Minimal direct analysis of the need for or results in the implementation of Emergency Medical Services (EMS) has been carried out by the Division of Highway Safety. The Department of Health has implemented the use of standardized trip reporting form to facilitate the collection of data related to response time, injury severity, treatment rendered, and conditions encountered. Linking this information with the investigating officer's accident report makes possible a more extensive investigation of the economic benefits of EMS in comparison with its costs. To date, only a verification of a significant reduction in response times has been carried out.

2.2.1.13 Time of Day/Day of Week

An examination of available data for several years for the time of day and day of week at which crashes are most likely to occur reveals no conspicuous changes. The largest percentage of all crashes occur on weekdays between the hours of 3 and 6 P.M. during the evening rush hour. Fatal crashes are most likely to occur between the hours of 9 P.M. and 3 A.M. daily. This time period on the weekends is especially hazardous when given the large number of drivers involved in fatal crashes who have been drinking beyond the legal limit (43.4 percent 9 P.M. - midnight and 59.4 percent midnight - 3 A.M.).

Because of the lack of any indicated changes and some limitations on data availability, no further analysis of this aspect has been done.

2.2.2 Mandated Programs

2.2.2.1 Fifty Five National Maximum Speed Limit (NMSL)

The generally accepted hypothesis is that more enforcement in the form of an increased number of citations will result in greater compliance and an associated decrease in crashes and deaths. Analysis of data by the Division of Highway Safety indicates that this hypothesis is not statistically definitive.

An analysis carried out by the Division of Highway Safety in 1977, the last year for which all necessary data were available, examined the relationship between citations per 100 million vehicles miles and the percentage exceeding 55 mph for all 50 states. A significant correlation ($r = .46$) was found between these variables, although there are many other factors contributing to 55 NMSL compliance that are not included here (e.g. officer visibility). If all the variables could be quantified, a multiple discriminant analyses might indicate which factor or factors have the greatest impact on NMSL compliance. In 1979, speeding in excess of 55 mph was a contributing factor in 49 percent of all fatal crashes occurring on roadways posted 55 miles per hour.

An analysis shows that Colorado does not have a 55 NMSL compliance problem in relation to federal guidelines or in relation to other states at the present time. Speeding is not becoming more of a factor in fatal crashes. Compliance with the 55 NMSL does not appear to be a problem in Colorado at this time.

2.2.2.2 Occupant Restraint Usage

2.2.2.2.1 Safety Belt Usage

The only reasonably accurate safety belt usage data for Colorado comes from FARS and is related to fatal crashes. No normalizing data about general usage in motor vehicles in Colorado is available. According to NHTSA, national safety belt usage has declined to about 14 percent.[1/] Recent statistics from the National Crash Severity Study show that occupants involved in crashes use their safety belts only 8.2 percent of the time.[2/]

1/ General Safety Belt Usage, DOT HS-803824, USDOT, NHTSA, February 1979

2/ Occupant Protection Program, Progress Report #2, USDOT, NHTSA, April 1979

Colorado safety restraint information for fatal crashes shows usage at 5.3 percent for occupants involved in fatal crashes in 1979. Possible hypotheses include lower safety belt usage in Colorado than national studies would indicate, or persons involved in fatal crashes are less likely than the general population to be wearing safety belts. Other hypotheses that only indirectly related usage with injury severity are possible as well.

Additional observation of data and its analysis is needed to determine probable causality so that appropriate countermeasures can be designed.

2.2.2.2.2 Child Restraint Usage

Below is a table showing the number of child deaths resulting from traffic crashes for 1975 through 1979. These represent approximately two percent of 1979 Colorado fatalities.

TABLE 2.3.2.4

FATAL CHILD OCCUPANTS UNDER AGE 6

	1975	1976	1977	1978	1979
Number of Child Fatalities Under 6 Years of Age	19	10	11	9	13

Source: FARS

Baseline data on use or non-use of child restraints is not available to normalize this data. Even if it were, an analysis of injury data (rather than fatalities) on children under six involved in motor vehicle crashes would be necessary to have enough cases to show statistically significant implications. To date, no statistical analyses have been carried out on this problem because of the unavailability of information.

2.2.2.3 Pupil Transportation

School bus crashes account for approximately 0.34 percent of the total crashes and approximately 0.24 percent of the injury crashes in the State based on 1979 data from the Department of Revenue. When normalized by the estimated vehicle miles traveled by school buses, these rates do not appear excessive. In 1979, public school buses transporting students to or from school experienced one crash per 117,150 vehicle miles traveled. Only about 14 percent of those crashes resulted in injuries to any party, whether on the school bus or not. The same statistics for all motor vehicles in 1979 show one crash per 153,559 vehicle miles traveled but approximately 29 percent were injury crashes. Consequently, school buses transporting pupils to or from school are in only 2/3 as many injury crashes per vehicle mile traveled as all motor vehicles.

Some combination of two alternative hypotheses is possible. One is that school buses are operated more safely than motor vehicles in general. The other is that there is a gross underreporting of motor vehicle property damage crashes given the completeness of school bus crash reports. Additional analysis based on improved data is necessary to determine if a problem does exist with transportation for school pupils.

2.2.3 Systems Support Problems

2.2.3.1 Traffic Records

Lack of a comprehensive traffic records system is the most serious system support problem. Without adequate data bases, better problem analyses and evaluations are impossible.

Even though the Department of Revenue has primary responsibility for collecting data in all traffic related areas, their files are untimely, incomplete, and not easily accessible for other agencies' purposes. Many agencies have created their own data files with their own procedures and interpretations. The outcome is a general inconsistency in and incomparability among the data available from various sources.

Good problem analysis and evaluation require reliable data, which is not sufficiently available to the Division of Highway Safety. The following narrative describes these data limitations by examining each program area for which there are data problems.

2.2.3.1.1 Alcohol Driving Records

With the development of the Alcohol and Drug Driving Program (ADDS), 1/ comprehensive descriptive data began to be collected on the abusive drinking driver. The individual is tracked through the legal system from the time referral is first made for an evaluation of alcohol abuse, through completion of treatment required as a part of probation.

As a result, alcohol and driving is the problem area for which the most comprehensive data will exist in the near future. Nevertheless, data deficiencies appear in the law enforcement portion of the process (reported arrests), as well as in outcome or treatment success. Both areas must be improved if a complete analysis of the program is to be statistically meaningful.

2.2.3.1.2 Repeat Offender Records

The Department of Revenue, Division of Motor Vehicles, is responsible for maintaining all motor vehicle related records including registrations, licensing, convictions for traffic offenses, and the accident file. This same department is responsible for the implementation of driver improvement programs.

With respect to the repeat offender, adequate data are maintained or can be easily obtained for:

- each individual driver history - name, birthdate, sex, etc., prior convictions, date of conviction, whether or not conviction was crash related,

1/ For a description of this Program, see the Alcohol Problem Analysis.

- total number of convictions by violation, and

- total number of persons with a given number of convictions by age.

The data problem arises in one major area. No data is compiled at the State level that bears on the original citation. The procedure of pleading to a lesser charge is widely used to expedite the court process. Therefore, it is difficult to determine the original charge. As a result the repeat offender, especially in alcohol related situations, may be overlooked.

Lack of immediate accessibility is also a serious problem. The data files are constructed so that separate programs are needed to access most types of data in the aggregate. This is both expensive and time consuming.

A coordinated, accessible data system in this problem area is urgently needed.

2.2.3.1.3 Youthful Driver Records

Because of Colorado legislation requiring three licenses be issued to the youthful driver, at ages 16, 18, and 21, with no provision for referencing from one license to the next, it is impractical to develop a study to assess the long term effect of driver education. Efforts in the Department of Education to identify those persons who have not taken driver education versus those who have completed driver education have not been successful. This hampers further analysis of this problem.

Since licenses are issued by the State, there is no way to accurately determine the age of licensees by county. This prevents determination of age distribution in crashes at the county or local level and the identification of problems a particular area or school district may be having in emphasizing or teaching driver education.

2.2.3.1.4 Protective Device Records

Because of a large scale federally sponsored three-year study, data are abundant concerning the use and non-use of motorcycle safety helmets. This is not true for seat belt usage. The only data currently available is gathered on those persons involved in fatal crashes. In some cases this information comes from witness statements or subjective observations by the investigating officers at the crash scene.

2.2.3.1.5 Emergency Medical Services Records

Data limitations in this problem area contribute to the inability to evaluate, even administratively, the current EMS operations in Colorado. More data are needed concerning response times, urban-rural conditions, treatment rendered, and outcomes. Current data identifies the number of EMTs trained, extent of standardization of services, and so forth. The Standard Ambulance Service Report now used by about 70 percent of the services should provide additional substantive data and make possible more extensive analysis of EMS in the future.

2.2.3.1.6 Roadway Problem Records

A great deal of data is collected concerning the roadway environment. These data are used to identify and classify hazardous roadway segments and locations by severity of incidents and by total crashes.

In-depth crash investigation is needed to better identify causative or contributory factors that are related to the roadway environment, but which may be overlooked by current investigation procedures. Coding of causative factors is also confined to the "first harmful event." This should be expanded to at least include the "most harmful event."

2.2.3.2 Training

Properly trained personnel are essential to the successful accomplishment of highway safety objectives.

Assessments by management and the Division of Highway Safety indicate that resources are lacking at the State and local levels to provide all of the necessary training related to:

Police Traffic Services,

Roadway Design, Construction & Maintenance,

Driver Licensing,

The Judiciary,

School Bus Drivers, and for

Incidents emanating from the transport of hazardous materials.

2.2.3.3 Legislative

The legislative branch of government must review and improve existing statutes and develop new legislation addressing DUI, use of vehicle occupant restraints, and other aspects of highway safety. To be able to take the best possible courses of action, the legislature must have more and better information.

2.2.3.4 Energy Conservation

A detailed analysis has not been performed on energy and its effect on the Colorado Highway Safety Program.

The energy situation must be assessed as it develops, not only as it affects the ability to conduct on-going programs, but also as the rising cost of energy causes shifts in the driving population and decreased travel. These shifts are being made to:

- Car pools,
- Bicycles,
- Motorcycles,
- Buses, and
- Less travel.

It is anticipated that the number of vehicles per thousand eligible drivers will decrease during peak hour traffic periods. The number of bicycles and motorcycles in use should increase, and the number of vehicle miles traveled per licensed driver should decrease. All of these changes should be evaluated

and addressed for potential impact on the Highway Safety Program.

2.2.3.5 Public Commitment and Support

Colorado will face a difficult situation in fiscal year 1982. A period of continued growth in population will be accompanied by a conservative stance on the part of State and local governments to expansion of services at the same rate. Existing State and local resources, although able to meet many present needs, are not at all adequate to meet the challenge of the 80s.

A recent survey taken by the Colorado Highway Department indicates that safety is the most important issue in transportation. To carry out the Highway Safety Division's responsibilities, it is essential to develop more effective ways to involve the private sector in safety programs. This involvement will be in the forms of increased awareness of existing programs and participations of the general public in voluntary programs.

SECTION III

SECTION III

PROBLEM SOLUTION PLANS

PSP 82-01 Reduce Alcohol Related Crashes

Objective 11 Educate and Motivate Law Enforcement Personnel
12 Educate and Motivate Judicial Personnel
13 Rehabilitate DUI Offenders
14 Solicit Public Education Support
15 Improve Alcohol Traffic-related Data Base

PSP 82-02 Reduce Driver Behavior Related Crashes

Objective 21 Enforce Traffic Regulation Compliance
22 Law Enforcement Training
23 Police Traffic Services Improvement

PSP 82-03 Improve Emergency Medical Services Delivery

Objective 31 Emergency Medical Technician (EMT) Training
32 Emergency Medical Services Equipment
33 National Emergency Aid Radio (NEAR)
34 Program Management

PSP 82-04 Improve Traffic Records System

Objective 41 Improve Traffic Records
42 Provide Data Support

PSP 82-05 Reduce Roadway Related Crashes

Objective 51 Improve Safety
52 Improve Traffic Engineering Services
53 Support Management

PSP 82-06 Provide Driver and Motorcycle Safety Education

Objective 61 Educate Young Drivers

PSP 82-07 Reduce Pedestrian and Bicycle Crashes

Objective 71 Educate Young Pedestrians and Bicyclists

PSP 82-08 Improve Driver Licensing and Attitude

Objective 81 Driver Licensing
82 Driver Improvement
83 Program Management

PSP 82-09 Increase Use of Occupant Restraints

Objective 91 Increase Use of Occupant Restraints
92 Staff Program Management

PSP 82-10 Provide Management Support

Objective 101 Improve Planning and Administration
102 Increase Public Awareness/Involvement

PROBLEM SOLUTION PLAN 82-01

REDUCE ALCOHOL RELATED CRASHES

Objective 11 Educate and Motivate Law Enforcement Personnel

- Task 01 Law Enforcement Seminars
- Task 02 Toxicology Program
- Task 03 Breathtesting Instruments

Objective 12 Educate and Motivate Judicial Personnel

- Task 01 Deputy District Attorneys
- Task 02 Judges

Objective 13 Rehabilitate DUI Offenders

- Task 01 Treatment Directory

Objective 14 Solicit Public Education Support

- Task 01 Alcohol Awareness
- Task 02 Alcohol Studies
- Task 03 Film Libraries
- Task 04 Staff Program Management

Objective 15 Improve Alcohol Traffic-related Data Base

- Task 01 ADDS Data System

PSP 82-01

REDUCE ALCOHOL RELATED CRASHES

Problem Statement

The alcohol/driving program in Colorado has matured to the stage of a primary concern with identifying the drinking driver and implementing appropriate countermeasures. This involves motivating and training law enforcement, since they have initial contact with the drinking driver. It also involves standardization and quality control of laboratory equipment in use, as this establishes whether or not drinking to excess has taken place. Judges and district attorneys must be familiar with techniques, equipment capability, and legal precedent related to the drinker/driver problem. Treatment of the drinking problem itself requires information about program availability. Public awareness of the drinker/driver as a problem is necessary to understanding of the problem, and to support identification and treatment of individuals involved.

Problem Solution Narrative

The countermeasures proposed in the objectives of this PSP are supported by the various tasks related to alcohol involvement in crashes. These are based upon NHTSA research resulting from the Alcohol Safety Action Projects of the early 1970s and by a management consensus within the DHS as to effective use of resources to impact the number of alcohol related crashes. Task activities directly support each specific objective.

Specific countermeasures involved are:

- detection and apprehension,
- adjudication,
- education/treatment, and
- public education - alcohol awareness.

Direct system support is also needed for the extensive laboratory analysis and equipment certification program and for specific program management information needs.

Evaluation Plan

Objectives have been set against a baseline calculated from trends over the last several years. The foundation of the evaluation plan will consist of the following:

- An assessment of crash data by type and geographic location. A detailed analysis of the data will be undertaken to relate crashes to an analytical model of crash involvement. This will be carried out to attempt to establish causality between these programs and the reduction in crash statistics.

- Evaluation of specific tasks will be conducted as an integral part of the overall impact evaluation of this PSP.

- Administrative evaluation of the success or failure of carrying out the specific tasks supporting each objective will be based on a comparison between planned vs. actual activity levels for the given tasks.

It should be noted that this PSP has been selected for impact evaluation to comply with Federal requirements.

Objective 82-01-11

EDUCATE AND MOTIVATE LAW ENFORCEMENT PERSONNEL

Task Narratives

Task 82-01-11-01 Law Enforcement Seminars

During the past two years, DUI Law Enforcement Seminars have been conducted for police chiefs in cooperation with the Colorado Association of Chiefs of Police. Similar seminars have been conducted for other police department uniformed supervisory personnel. Such training and motivational seminars should be repeated every two or three years at this level.

More extensive annual training and motivational seminars are necessary for street officers because of the high rate of turnover. Alcohol related adjudications increased 20 percent in calendar year 1980, which, all other things being equal, implied a similar increase in arrests. These are logically related to increased awareness and motivation on the part of law enforcement personnel.

Task 82-01-11-02 Toxicology Program

This task provides for ongoing administration of the toxicology quality control program. This program certifies private laboratories that perform alcohol related tests for law enforcement agencies, certified breath testing instruments, and trains breath test instrument instructors and operators. The toxicology program itself:

- tests blood and urine specimens from fatalities and other persons involved in vehicle crashes,
- collects blood alcohol information related to vehicle crashes,
- provides consultation services on alcohol/driving related problems at both the local and state level,
- conducts alcohol breath test equipment and technique demonstrations as needed throughout the state,
- maintains and repairs breath test instruments,
- carries out research and evaluation of new equipment related to alcohol/driving program, and
- provides certified alcohol standards and reagents to test facilities.

During fiscal year 1981, the State agreed to fund one of the two positions in the Alcohol Testing Laboratory and to assume full funding for Laboratory Personnel in fiscal 1982.

To insure continuation of the field operations of the Alcohol Testing Laboratory, operating expense, travel and subsistence funding will continue on a limited basis during fiscal year 1982.

Task 82-01-11-03 Breathtesting Instruments

The standardization of breathtest instruments statewide was completed in fiscal year 1981. Twelve communities and agencies have purchased these items utilizing 100 percent local funds. Forty-five communities and agencies joined with the Division of Highway Safety in purchasing breathtest instruments on the basis of 36 percent local funds and 64 percent Section 402 funds.

Several additional communities have expressed interest in breathtest instruments because of increased motivation on the part of their police departments and due to greater awareness of the alcohol/driving problem on the part of public officials. These small communities will be included in the standardization program when they demonstrate the ability to increase DUI arrests to the point where an expensive equipment investment is warranted. Potential locations for such additional instruments are: Akron, Wray, Monte Vista, Brush, Cripple Creek, and Pagosa Springs.

Management feels it is desirable to provide at least two instruments for Drink-In demonstrations. These same two instruments would be used as temporary substitutes in the event of failure of a heavily used similar item in a community.

This report is authorized by 23 U.S.C. 402. Failure to use this form could result in a delay of obtaining grant funds.

U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
FEDERAL HIGHWAY ADMINISTRATION
PROBLEM SOLUTION PLAN (PSP)

O.M.B. No. 004-R2439
Approval Expires
August 1982

PSP TITLE: Reduce Alcohol Related Crashes

PSP NO: 82-01

OBJECTIVE 11

STATE: Colorado

PAGE: 1 of 3

TASK STATEMENT: To increase DUI arrests by providing training and motivational workshops for approx. 1200 law enforcement officers and conducting other activities to achieve this objective.

MILESTONES

CURRENT FISCAL YEAR 19 82

PLANNING YEARS

RESP	TASK TITLES	PLANNED QTY	1st Q	2nd Q	3rd Q	4th Q	FY +1	FY +2	FY +3	FY +4	FY +5
DHS	Task 01 - Activities	1									
	- DUI Law Enforcement Workshops	40									
	- Monitor activities of Implied Consent Specialists	24									
	- Assist in training of Intoxilyzer instructors and operators	8									
	- Provide technical assistance to law enforcement agencies	15									

STD	CURRENT YEAR COST BY TASK (000's)	TOTAL	STATE	LOCAL	402	402 TO LOCAL	OTHER FED	
308	01 DUI Law Enforcement Activities (personal services) (administrative) (training materials)	45.0	11.2		33.8			SEE PROGRAM MODULE COST SUMMARY FOR PLANNING YEARS' COSTS
	TOTALS---→	45.0	11.2		33.8			

HS Form 57 (Rev. 7/77) Replaces HS-57A, HS-212 and previous editions of HS-57 which are obsolete.

III-11

This report is authorized by 23 U.S.C. 402. Failure to use this form could result in a delay of obtaining grant funds.

U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
FEDERAL HIGHWAY ADMINISTRATION
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O.M.B. No. 004-R2439
Approval Expires
August 1982

PSP TITLE: Reduce Alcohol Related Crashes

PSP NO: 82-01

OBJECTIVE 11

STATE: Colorado

PAGE: 2 of 3

TASK STATEMENT: To continue operation of a quality Toxicology Program for alcohol involved drivers.

MILESTONES

CURRENT FISCAL YEAR 19 82

PLANNING YEARS

RESP	TASK TITLES	PLANNED QTY	1st Q	2nd Q	3rd Q	4th Q	FY +1	FY +2	FY +3	FY +4	FY +5
DHS	Task 02 - Administer a Toxicology Program (1 Unit = 1 Program) Activities - Certify instruments and operator instructors - Certify laboratories - Conduct blood specimen tests - Perform research and consultations - Appear as expert witness - Perform minor maintenance on instruments	1									

STD	CURRENT YEAR COST BY TASK (000's)	TOTAL	STATE	LOCAL	402	402 TO LOCAL	OTHER FED	
308	02 Administer a Toxicology Program (administration)	10.0			10.0			SEE PROGRAM MODULE COST SUMMARY FOR PLANNING YEARS' COSTS
	TOTALS---→	10.0			10.0			

HS Form 57 (Rev. 7/77) Replaces HS-57A, HS-212 and previous editions of HS-57 which are obsolete.

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U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
FEDERAL HIGHWAY ADMINISTRATION
PROBLEM SOLUTION PLAN (PSP)

O.M.B. No. 004-R2439
Approval Expires
August 1982

PSP TITLE: Reduce Alcohol Related Crashes

PSP NO: 82-01

OBJECTIVE 11

STATE: Colorado

PAGE: 3 of 3

TASK STATEMENT: To continue standardization of Breath Test Instruments and procedures.

MILESTONES

CURRENT FISCAL YEAR 19 82

PLANNING YEARS

RESP	TASK TITLES	PLANNED QTY	1st Q	2nd Q	3rd Q	4th Q	FY +1	FY +2	FY +3	FY +4	FY +5
DHS	Task 03 - Breath Test Instruments	5									
	Activities - Purchase Instruments - Provide back-up for inoperative instruments										

STD	CURRENT YEAR COST BY TASK (000's)	TOTAL	STATE	LOCAL	402	402 TO LOCAL	OTHER FED	
308	03 Purchase Breath Test Instruments (equipment and facilities)	22.0		2.0	20.0	20.0		SEE PROGRAM MODULE COST SUMMARY FOR PLANNING YEARS' COSTS
	TOTALS---→	22.0		2.0	20.0	20.0		

HS Form 57 (Rev. 7/77) Replaces HS-57A, HS-212 and previous editions of HS-57 which are obsolete.

Objective 82-01-12

EDUCATE AND MOTIVATE JUDICIAL PERSONNEL

Task Narratives

Task 82-01-12-01 Deputy District Attorneys

During fiscal year 1981 an excellent DUI Prosecution Manual was produced through the joint efforts of the District Attorneys' Council and the Division of Highway Safety. New Deupty District Attorneys will be given a copy of the manual, view a three hour video tape on DUI prosecution conducted by two prominent judges and a leading defense attorney, and receive related training. This task is designed to improve prosecution of DUI cases by new district attorneys. Costs for reprinting and revisions of this manual will be borne by local/state resources.

Task 82-01-12-02 Judges

The Alcohol and Drug Driving Safety Program established by statute in each judicial district involve county judges in DUI adjudication more actively than ever before. This task provides continuing training and education for county judges in all aspects of DUI adjudication. It will ensure that these judges are aware of and skilled in modern adjudicatory developments for handling DUI cases. Specialized alcohol training and education will be provided at the National Judicial College located in Reno, Nevada, or at similar facilities for selected county judges. In addition, a spring seminar will be sponsored by the DHS for all district and county judges as a forum to review developments and problems in traffic related cases, including DUI/DWAI cases. New judges will be scheduled for an orientation program which covers, among other things, medical aspects of alcohol and a controlled drinking demonstration.

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U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
FEDERAL HIGHWAY ADMINISTRATION
PROBLEM SOLUTION PLAN (PSP)

O.M.B. No. 004-R2439
Approval Expires
August 1982

PSP TITLE: Reduce Alcohol Related Crashes

PSP NO: 82-01

OBJECTIVE 12

STATE: Colorado

PAGE: 1 of 2

TASK STATEMENT: Provide training for new Deputy District Attorneys and update/publish revisions to the Prosecutor's Manual.

MILESTONES

CURRENT FISCAL YEAR 19 82

RESP	TASK TITLES	PLANNED QTY	1st Q	2nd Q	3rd Q	4th Q	FY +1	FY +2	FY +3	FY +4	FY +5
DHS	Task 01 - Deputy District Attorneys										
	Activities - Train new Deputy DA's (1 unit - 1 DA trained)	15									
	- Revise, up-date, publish changes to manual (1 unit = 1 revision)	5									

STD	CURRENT YEAR COST BY TASK (000's)	TOTAL	STATE	LOCAL	402	402 TO LOCAL	OTHER FED	
308	01 Deputy District Attorneys (administration)	2.5			2.5	2.5		SEE PROGRAM MODULE COST SUMMARY FOR PLANNING YEARS' COSTS
	TOTALS---→	2.5			2.5	2.5		

HS Form 57 (Rev. 7/77) Replaces HS-57A, HS-212 and previous editions of HS-57 which are obsolete.

III-15

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U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
FEDERAL HIGHWAY ADMINISTRATION
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O.M.B. No. 004-R2439
Approval Expires
August 1982

PSP TITLE: Reduce Alcohol Related Crashes

PSP NO: 82-01

OBJECTIVE 12

STATE: Colorado

PAGE: 2 of 2

TASK STATEMENT: Improve court processing of DUI cases by providing training for judges.

MILESTONES

CURRENT FISCAL YEAR 19 82

PLANNING YEARS

RESP	TASK TITLES	PLANNED QTY	1st Q	2nd Q	3rd Q	4th Q	FY +1	FY +2	FY +3	FY +4	FY +5
DHS	Task 02 - Judges										
	Activities - Send Judges to National Judicial College Alcohol Speciality Course	5									
	- Conduct state seminar for all district and county judges in DUI adjudication (1 unit - 1 judge attending)	200									

STD	CURRENT YEAR COST BY TASK (000's)	TOTAL	STATE	LOCAL	402	402 TO LOCAL	OTHER FED	
308	02 Judge Education (administration)	14.0	4.0		10.0			SEE PROGRAM MODULE COST SUMMARY FOR PLANNING YEARS' COSTS
	TOTALS---→	14.0	4.0		10.0			

HS Form 57 (Rev. 7/77) Replaces HS-57A, HS-212 and previous editions of HS-57 which are obsolete.

Objective 82-01-13

REHABILITATE DUI OFFENDERS

Task Narrative

Task 82-01-13-01 Treatment Directory

The DUI Treatment Directory contains information concerning all licensed and certified Alcohol and Drug Education/Treatment Programs in the State of Colorado. The directory was revised a year ago, but because of major changes in the number, status, location, and operating procedures, a revision is needed during the fiscal year 1982. This will make the referral functions of the Alcohol and Drug Evaluation Specialists easier, and consequently enable them to work more effectively.

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August 1982

PSP TITLE: Reduce Alcohol Related Crashes

PSP NO: 82-01

OBJECTIVE 13

STATE: Colorado

PAGE: 1 of 1

TASK STATEMENT: Improve referral service to Treatment Agencies.

MILESTONES

CURRENT FISCAL YEAR 19 82 | PLANNING YEARS

RESP	TASK TITLES	PLANNED QTY	1st Q	2nd Q	3rd Q	4th Q	FY +1	FY +2	FY +3	FY +4	FY +5
DHS	Task 01 - Treatment Directory Activity - Revise/reprint Treatment Directory (1 unit = 1 revision)	1									

STD	CURRENT YEAR COST BY TASK (000's)	TOTAL	STATE	LOCAL	402	402 TO LOCAL	OTHER FED	
308	01 Treatment Directory (administration)	1.5			1.5	1.5		SEE PROGRAM MODULE COST SUMMARY FOR PLANNING YEARS' COSTS
	TOTALS---→	1.5			1.5	1.5		

HS Form 57 (Rev. 7/77) Replaces HS-57A, HS-212 and previous editions of HS-57 which are obsolete.

Objective 82-01-14

SOLICIT PUBLIC EDUCATION SUPPORT

Task Narratives

Task 82-01-14-01 Alcohol Awareness

This task will continue ongoing public information and education programs. It will include, but not be limited to, purchase of 100,000 BAC calculators, 100,000 handouts of various kinds, an Alcohol Awareness public information program, and purchase of alcohol related films for distribution to agencies other than those serviced by regional film libraries.

It will also support abusive drinking driver programs at all levels of the public school system. This program has been introduced into nearly 75 middle and junior high schools in Colorado. By placing AL-CO-HOL materials in fifty schools per year for the next four years, all young future drivers can be reached. In-service training for teachers is a part of this endeavor.

Task 82-01-14-02 Alcohol Studies

The Alcoholism Council of Colorado conducts a Summer School on Alcohol Studies annually. This school brings together people from all disciplines concerned with alcohol abuse. The Division of Highway Safety provides scholarships so that people in the criminal justice field can learn what is being done in the prevention and treatment of alcohol abusers. The goal is to improve communication among the various facets of the system and increase acceptance of the alternatives available in the overall system.

Task 82-01-14-03 Film Libraries

During fiscal year 1980, six regional film libraries were established in support of Level I and Level II Education/Treatment Programs, and to promote alcohol driving awareness throughout the State. This task will permit the libraries to expand their resources by procuring the latest films to better serve the education/treatment programs and the general public, as represented by schools, PTAs, service organizations, etc.

Task 82-01-14-04 Staff Program Management

This task provides for part of a FTE to monitor and implement the public education activities.

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U.S. DEPARTMENT OF TRANSPORTATION
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O.M.B. No. 004-R2439
Approval Expires
August 1982

PSP TITLE: Reduce Alcohol Related Crashes

PSP NO: 82-01

OBJECTIVE 14

STATE: Colorado

PAGE: 1 of 1

TASK STATEMENT: To solicit and improve public awareness of alcohol driving countermeasures and aims.

MILESTONES

CURRENT FISCAL YEAR 1982 | PLANNING YEARS

RESP	TASK TITLES	PLANNED QTY	1st Q	2nd Q	3rd Q	4th Q	FY +1	FY +2	FY +3	FY +4	FY +5
DHS	Task 01 - Alcohol Awareness										
	Activities - Develop/distribute informational items:										
	BAC Calculators	100,000									
	Handouts	100,000									
	AL-CO-HOL Programs (1 unit = 1 item distributed or program supported)	50									
	Task 02 - Alcohol Studies (1 unit - 1 person/scholarship to seminar workshop)	10									
	Task 03 - Film Libraries (1 unit - 1 film purchased)	20									
	Task 04 - Staff Program Management (1 unit = 1 FTE)	35									

STD	CURRENT YEAR COST BY TASK (000's)	TOTAL	STATE	LOCAL	402	402 TO LOCAL	OTHER FED
308	01 Alcohol Awareness (training materials)	23.2			23.2	23.2	
	02 Alcohol Studies (training)	2.0			2.0	2.0	
	03 Film Libraries (training materials)	10.0			10.0	10.0	
	04 Staff Program Management (personal services) (administration)	14.7	3.7		11.0		
	TOTALS---→	49.9	3.7		46.2	35.2	

SEE PROGRAM MODULE COST SUMMARY FOR PLANNING YEARS' COSTS

HS Form 57 (Rev. 7/77) Replaces HS-57A, HS-212 and previous editions of HS-57 which are obsolete.

Objective 82-01-15

IMPROVE ALCOHOL TRAFFIC-RELATED DATA BASE

Task Narrative

Task 82-01-15-01 ADDS Data System

The evaluation plan for assessing effectiveness of the Colorado Alcohol and Drug Driving Safety (ADDS) Program includes use of recidivism as a measure of program impact. Recidivism, in this case, means rearrest or reconviction for alcohol related traffic offenses (DUI and DWAI). Determining whether drivers who were initially convicted and sentenced under the ADDS Program continue to drink, drive, be apprehended, prosecuted, and adjudicated requires that periodic reviews of their driver history records (DHR) be made.

The magnitude of this task is immense and nearly impossible to complete if done manually, as is the case at present. Between 15,000 and 20,000 DUI/DWAI convictions occur annually. Thus, the number of cases (persons) to follow through time to check for recidivism increases rapidly. DHR's currently are accessed one at a time via a remote computer terminal - a very timely and tedious task. Therefore, the need exists to fully automate this procedure so that all DHRs of interest can be scanned in a single pass of the entire computer file rather than continuing to undertake individual record searches.

This task addresses the above problem by providing funds to be used in developing a set of computer programs which will 1) automatically scan DHRs for the entire population of convicted DUI/DWAIs; 2) continually provide updated information on new convictions for alcohol and other moving violations; 3) convert this new information into a data format which is compatible with the ADDS data base (located on a different computing system); and, 4) merge the new DHR information with the ADDS data file.

Staff program management for data gathering, compilation and evaluation will be provided by part of one FTE.

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U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
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PROBLEM SOLUTION PLAN (PSP)

O.M.B. No. 004-R2439
Approval Expires
August 1982

PSP TITLE: Reduce Alcohol Related Crashes

PSP NO: 82-01
Objective 15

STATE: Colorado

PAGE: 1 of 1

OBJECTIVE(S): To improve the quality of the data management system being used to evaluate the State's Alcohol and Drug Driving Safety Program

MILESTONES

RESP	TASK TITLES	PLANNED QTY	CURRENT FISCAL YEAR 19____ 1st Q	2nd Q	3rd Q	4th Q	PLANNING YEARS FY +1	FY +2	FY +3	FY +4	FY +5
DHS	Task 01 - ADDS Data System	1									
	(1 unit = 1 program developed) (1 unit = 1 FTE)	.4									

STD	CURRENT YEAR COST BY TASK (000's)	TOTAL	STATE	LOCAL	402	402 TO LOCAL	OTHER FED	
308	01 ADDS Data System (administration) (personal services)	37.8	14.7		23.1			SEE PROGRAM MODULE COST SUMMARY FOR PLANNING YEARS' COSTS
	TOTALS---→	37.8	14.7		23.1			

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PROBLEM SOLUTION PLAN 82-02

REDUCE DRIVER BEHAVIOR RELATED CRASHES

Objective 21 Enforce Traffic Regulation Compliance

- Task 01 Urban STEP
- Task 02 Police Traffic Services by Sheriffs/Police

Objective 22 Law Enforcement Training

- Task 01 PTS Training
- Task 02 Judicial Training
- Task 03 Hazardous Materials Training
- Task 04 Staff Program Management

Objective 23 Police Traffic Services Improvement

- Task 01 PTS Management Studies
- Task 02 Data Base Support (STEP-MIS)
- Task 03 Staff Program Management

PSP 82-02

DRIVER BEHAVIOR RELATED CRASHES

Problem Statement

Driver infractions show up as a higher than normal representation in fatal crashes. Drivers with one or more previous violations are involved in 56 percent of fatal crashes, yet comprise only 16 percent of the total driving population in Colorado. This appears to be the result of inattention, lack of awareness of the consequences of their actions, or poor attitude. It is necessary to plan countermeasures that will effectively improve the level and type of enforcement efforts to reduce the high percentage of errant driver actions. This PSP includes tasks within objectives to impact the behavior of traffic law offenders and the general motoring public.

Personnel directly involved in traffic safety activities require an intimate knowledge of the many factors involved in the crash problem in order to effectively support all of the PSPs and associated countermeasures. It has been administratively determined that lack of training on the part of the implementing personnel hinders the achievement of task objectives. Specific areas of "people" concern that need to be addressed are as follows:

- Police need crash investigation training to achieve uniformity in techniques, enhance data collection, and thus improve the quality of traffic records data for analysis purposes. Traffic services training is needed to develop techniques in and an appreciation for police traffic resources management.

- Municipal and county traffic court judges need a uniformity of procedures and techniques since they decide the violations on almost all citations issued in the State. If the basis for their decisions emanates from uniform procedures an improved system will result.

- Police, fire and other emergency service personnel need the capability to react and control the environment at sites of hazardous materials incidents. Awareness seminars and technical training courses are required for these categories of persons, and also for community leaders, shippers and carriers.

Problem Solution Narrative

Increased and more enlightened police traffic enforcement efforts and resultant convictions are intended to lead to more careful driving. The objective for enforcing traffic regulation compliance provides for additional resources to local law enforcement agencies for innovative selective enforcement activities. The objective for law enforcement training provides for assistance to State and local law enforcement and emergency service personnel to attend

technical specialty and general training courses and seminars to enhance traffic safety efforts. The last objective covers system improvement to police traffic activities by providing needed review of resources and capabilities and provides for management analysis and enhancement of resource utilization.

Evaluation Plan

Evaluation includes the construction and validation of appropriate statistical models to link causality of behavior improvement with specific tasks contained in this PSP. During this process, administrative evaluation will be carried out to ensure that each task achieves predetermined interim milestones.

Objective 82-02-21

ENFORCE TRAFFIC REGULATION COMPLIANCE

Task Narratives

Task 82-02-21-01 Urban Selective Traffic Enforcement Program

This Task provides for the second and final year funding for the Boulder Police Department Selective Traffic Enforcement Program (STEP). This program places major emphasis on selective enforcement at high crash incidence locations and road segments. Funds are to be provided for continuing overtime support of STEP officers, data processing, and automated statistical analysis of data generated by STEP efforts.

Support for STEP strategies will be implemented in at least two additional high hazard target communities. This activity will provide selective traffic enforcement resources for the Wheat Ridge and the Commerce City or Longmont police departments. STEP strategies will be emphasized on high hazard road segments and high frequency crash locations previously identified in the above communities by PTS Management Studies and the STEP-MIS Data System.

About half a staff FTE will be dedicated to coordinate and provide technical assistance to municipal police departments.

Task 82-02-21-02 Police Traffic Services by Sheriffs/Police

This Task is to encourage county sheriffs and rural police departments to assume a larger share of the traffic enforcement and crash investigation burden on local and rural roads. Traditionally, sheriff's departments investigate criminal activity and serve as officers of the court. Rural police departments, particularly those in areas of rapid economic growth and tourist areas, do not have resources to diversify and address burdensome traffic problems. Due to these duties and budget limitations, most have not been involved in traffic enforcement and operations to the extend necessary to enable adequate statewide coverage. A concerted and integrated selective traffic enforcement program is needed.

Participating sheriff's departments will operate on those roadways not under the jurisdiction of municipalities. Where it has been determined that the Colorado State Patrol (CSP) does not possess the necessary resources to patrol primary and secondary roadways, sheriffs will be encouraged to provide needed coverage. This effort will be directed toward significant crash causative factors as determined from study and analysis by the Division of Highway Safety.

Equipment and specialized training will be provided for county sheriffs' departments to increase their traffic control, speed enforcement and crash investigation capabilities. This Task will be initiated in Fiscal Year 1982 and continue in subsequent funding years.

Two county sheriffs' departments, as a pilot project, will be funded in Fiscal Year 1982. One is planned to be a metropolitan area department and the other from a rural area. Selection will be made from among the list of counties with the highest incidence of crashes in Section 2 (Tables 2.1.4.1 and 2.1.4.2). Support will include specialized training for participating sheriffs' officers and the provision for some needed traffic enforcement equipment.

In order to encourage small rural municipal police departments to assume a larger share of the traffic enforcement burden on local roads and highways, small high hazard communities will be targeted on a prioritized basis for participation (Table 2.1.3.2). This will include some with populations of less than 5,000 persons, ranked by the number of crashes per 1,000 population.

Speed measuring devices will be provided to augment STEP endeavors designed to impact the rural community's growing crash problem. Those that are currently using these techniques will be encouraged to improve their present capabilities in traffic control, selective enforcement techniques and crash investigation.

Communities identified in the problem analysis section and targeted for participation are: Vail, Aspen, Glenwood Springs, Steamboat Springs, Breckenridge, Durango and Estes Park.

This Task complements and is directly related to Task 82-07072-01, PTS Instruction and Task 82-07-73-02, Regional Safety Development. About half a staff FTE will be dedicated to coordinate and provide technical assistance to county and local agencies in this program area.

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U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
FEDERAL HIGHWAY ADMINISTRATION
PROBLEM SOLUTION PLAN (PSP)

O.M.B. No. 004-R2439
Approval Expires August 1982

PSP TITLE: Reduce Driver Behavior Related Crashes

PSP NO: 82-02 Objective 21

STATE: Colorado

OBJECTIVE(S): To increase compliance with Traffic Regulations

MILESTONES

CURRENT FISCAL YEAR 19 82

RESP	TASK TITLES	PLANNED QTY	1st Q	2nd Q	3rd Q	4th Q	PLANNING YEARS FY +1	FY +2	FY +3	FY +4	FY +5
DHS	Task 01 - Urban STEP										
	01.1 Boulder STEP (1 unit - 1 program)	1									
	01.2 Wheat Ridge STEP (1 unit = 1 program)	1									
	01.3 _____ STEP (1 unit = 1 program)	1									
	01.4 Staff Program Management and Technical Assistance (1 unit = 1 FTE)	.4									

STD	CURRENT YEAR COST BY TASK (000's)	TOTAL	STATE	LOCAL	402	402 TO LOCAL	OTHER FED
315	01.1 Boulder STEP (personal services) (administration)	100.0		50.0	50.0	50.0	
	01.2 Wheat Ridge STEP (personal services) (administration)	183.0		50.0	133.0	133.0	
	01.3 _____ STEP (personal services) (administration)	25.0			25.0	25.0	
	01.4 Program Management (personal services) (administration)	16.0	4.0		12.0		
	TOTALS ---→	324.0	4.0	100.0	220.0	208,0	

SEE PROGRAM MODULE COST SUMMARY FOR PLANNING YEARS' COSTS

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U.S. DEPARTMENT OF TRANSPORTATION
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PSP TITLE: Reduce Driver Behavior Related Crashes

PSP NO: 82-02
Objective 21

STATE: Colorado

PAGE: 2 of 2

OBJECTIVE(S): To increase compliance with Traffic Regulations

MILESTONES

CURRENT FISCAL YEAR 19 82 | PLANNING YEARS

RESP	TASK TITLES	PLANNED QTY	1st Q	2nd Q	3rd Q	4th Q	FY +1	FY +2	FY +3	FY +4	FY +5
DHS	02 PTS by Sheriffs/Police										
	02.1 Arapahoe County Sheriff's Dept. STEP (1 unit = 1 program)	1									
	02.2 Pitkin County Sheriff's Dept. STEP (1 unit = 1 program)	1									
	02.3 Steamboat Springs STEP (1 unit = 1 program	1									
	02.4 Durango STEP (1 unit = 1 program)	1									
	02.5 Staff Program Management and Technical Assistance (1 unit = 1 FTE)	.4									

STD	CURRENT YEAR COST BY TASK (000's)	TOTAL	STATE	LOCAL	402	402 TO LOCAL	OTHER FED
315	02.1 Arapahoe STEP	100.0		50.0	50.0	50.0	
	02.2 Pitkin STEP	50.0		25.0	25.0	25.0	
	02.3 Steamboat Springs STEP	20.0		10.0	10.0	10.0	
	02.4 Durango STEP (all above - personal services and administration)	20.0		10.0	10.0	10.0	
	02.5 Program Management (personal services) (administration)	16.0	4.0		12.0		
	TOTALS---->	206.0	4.0	95.0	107.0	95.0	

SEE PROGRAM MODULE COST SUMMARY FOR PLANNING YEARS' COSTS

HS Form 57 (Rev.) Replaces HS-57A, HS-212 and previous editions of HS-57 which are obsolete.

Objective 82-02-22

LAW ENFORCEMENT TRAINING

Task Narratives

Task 82-02-22-01 Police Traffic Services Training

Police traffic services training focuses on specialized instruction for the traffic police officer to enhance skill and awareness levels in a traffic environment. Schools supported include short and long courses at Northwestern University Traffic Institute (NUTI), Central Missouri State University (CMSU), and University of Northern Florida (UNF) and the Colorado Law Enforcement Training Academy (CLETA).

Funds will be provided for extended training for two police traffic supervisors at the NUTI long course, twelve police traffic supervisors at CMSU and two Police Traffic Supervisors at University of Northern Florida. Training will also be provided for selected officers to attend NUTI short courses to further develop a base of specialists and instructors for field training in crash investigation and selective enforcement techniques. These courses include an extensive program of instruction in all areas of police traffic management. Emphasis is placed on both administrative and practical law enforcement procedures. Future planning calls for the same number of personnel to be trained annually as funds are available.

The Task also includes a specialized field training seminar by Northwestern University Traffic Institute to be conducted in Colorado. This seminar will be for 40 local officers and supervisors in "Operational level STEP" training. This latter activity is a carryover from FY 1980 and FY 1981 that could not be accomplished due to funding limitations.

The quality of crash data depends greatly upon the knowledge, skill, and procedures employed by on-the-scene investigators. Another planned training activity will be crash investigation for 75 officers and 25 agencies to be held at CLETA. These investigators will function as sources of information, expert witnesses, and instructors for other officers within their agencies.

A special traffic enforcement problem seminar is tentatively scheduled for implementation in FY 1982 at CLETA. If successful, the course will be offered in subsequent planning years. "State of Art" techniques addressing current traffic enforcement problems will be addressed in the seminar offered for 25 State and local traffic police officers.

Task 82-02-22-02 Judicial Training

Support for training of county and municipal judges and court administrators will be emphasized. In so doing, emphasis will be

placed on standardization of judicial techniques and procedures, and the need for traffic court personnel to be aware of their role in traffic safety efforts and for current developments in that field.

Continued support will be provided to enable four recently appointed municipal or county judges to attend the National Judicial College at Reno, Nevada. The Traffic Court specialty session provides these persons with the benefit of the latest in traffic evidence, case law, and procedures.

Support will continue for an annual Colorado County and District Judges Association Conference and training session. This is an annual event for the purpose of examining problems and solutions as they related to highway traffic safety and the Colorado trial courts.

Task 82-02-22-03 Hazardous Materials Training

This Task provides the necessary resources to conduct training programs in all phases of emergency response problems in dealing with hazardous materials incidents. Training will consist of three-day awareness courses, technical courses for first responders to hazardous materials incidents, and courses for shippers and handlers. The facilities and staff of the Colorado Training Institute (CTI) plus qualified volunteers from both the public and private sectors will be used for this endeavor.

Task 82-02-22-04 Staff Program Management

Law enforcement training activities will be managed, coordinated and technical assistance provided to State and local agencies by part of a staff FTE.

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U.S. DEPARTMENT OF TRANSPORTATION
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August 1982

PSP TITLE: Reduce Driver Behavior Crashes

PSP NO: 82-02

OBJECTIVE 22

STATE: Colorado

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TASK STATEMENT To improve the training and awareness of police traffic officers

MILESTONES

CURRENT FISCAL YEAR 19 82 | PLANNING YEARS

RESP	TASK TITLES	PLANNED QTY	1st Q	2nd Q	3rd Q	4th Q	FY +1	FY +2	FY +3	FY +4	FY +5
DHS	Task 01 - PTS Training:										
	01.1 NUTI Long Course	2									
	01.2 NUTI Short Course	8									
	01.3 CMSU Traffic Management Course	12									
	01.4 University of Northern Florida (Police Traffic Management Inst.)	2									
	01.5 NUTI Field Training Course	40									
	01.6 CLETA Crash Investigation	75									
	01.7 CLETA PTS Training Seminar	25									
	(all above 1 unit = 1 officer trained)										

STD	CURRENT YEAR COST BY TASK (000's)	TOTAL	STATE	LOCAL	402	402 TO LOCAL	OTHER FED	
315	01 PTS Training:							SEE PROGRAM MODULE COST SUMMARY FOR PLANNING YEARS' COSTS
	01.1 NUTI Long Course	80.0	20.0	20.0	40.0	20.0		
	01.2 NUTI Short Course	20.0	6.0	6.0	8.0	4.0		
	01.3 CMSU Course	117.0	27.0	54.0	36.0	24.0		
	01.4 University of Northern Florida	11.4	2.7	2.7	6.0	3.0		
	01.5 NUTI Field Training	39.0	7.0	14.0	18.0	12.0		
	01.6 CLETA Crash Investigation	45.0	12.5	25.0	7.5	5.0		
	01.7 CLETA PTS Training (Training materials) (administration)	15.0	4.0	8.0	3.0	1.5		
	TOTALS---→	327.4	79.2	129.7	118.5	69.5		

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PSP TITLE: Reduce Driver Behavior Crashes

PSP NO: 82-02

OBJECTIVE 22

STATE: Colorado

PAGE: 2 of 4

TASK STATEMENT: To train Judges in traffic case techniques, evidence, case law, and procedures.

MILESTONES

CURRENT FISCAL YEAR 19 82

PLANNING YEARS

RESP	TASK TITLES	PLANNED QTY	1st Q	2nd Q	3rd Q	4th Q	FY +1	FY +2	FY +3	FY +4	FY +5
DHS	Task 02 - Judiciary Training:										
	02.1 Traffic Court Specialty Reno National College of Judiciary	4									
	02.2 Court Administrators and Clerks Seminar	75									
	02.3 Judicial Seminar (all above 1 unit - 1 person attending)	200									

STD	CURRENT YEAR COST BY TASK (000's)	TOTAL	STATE	LOCAL	402	402 TO LOCAL	OTHER FED	
315	02 - Judiciary Training:							SEE PROGRAM MODULE COST SUMMARY FOR PLANNING YEARS' COSTS
	02.1 National College of Judiciary	8.0	1.5	1.5	5.0	2.5		
	02.2 Court Admin. Seminar	8.0	3.0	3.0	2.0	1.0		
	02.3 Judicial Seminar (Training materials) (Administration)	5.0			5.0			
	TOTALS---→	21.0	4.5	4.5	12.0	3.5		

HS Form 57 (Rev. 7/77) Replaces HS-57A, HS-212 and previous editions of HS-57 which are obsolete.

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U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
FEDERAL HIGHWAY ADMINISTRATION
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PSP TITLE	PSP NO:	STATE	PAGE
Reduce Driver Behavior Crashes	82-02	Colorado	3 of 4
	OBJECTIVE 22		

TASK STATEMENT To train first responders and others in all phases of emergency response to and requirements to prevent hazardous materials incidents.

RESP	TASK TITLES	PLANNED QTY	MILESTONES: CURRENT FISCAL YEAR 19 82 1st Q	2nd Q	3rd Q	4th Q	PLANNING YEARS FY +1	FY +2	FY +3	FY +4	FY +5
DHS	Task 03 Hazardous Materials Training										
	03.1 Train first responders in commercial vehicle inspections	6									
	03.2 Conduct 3-day awareness seminars for public officials	7									
	03.3 Train shippers and carriers in transport/ handling and cargo tank compliance/inspections.	13									
	03.4 Hazardous Materials Technical Course (all above 1 unit = 1 course conducted)	9									

STD	CURRENT YEAR COST BY TASK ('000's)	TOTAL	STATE	LOCAL	402	402 TO LOCAL	OTHER FED	
316	03 Hazardous Materials Training (administration) (training materials) (manpower training)	130.0		80.0	50.0			SEE PROGRAM MODULE COST SUMMARY FOR PLANNING YEARS' COSTS
	TOTALS---→	130.0		80.0	50.0			

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PSP TITLE	PSP NO:	STATE	PAGE
Reduce Driver Behavior Related Crashes	82-02	Colorado	4 of 4
	Objective 22		

TASK STATEMENT. To improve and manage the law enforcement training program.

RESP	TASK TITLES	PLANNED QTY	MILESTONES: CURRENT FISCAL YEAR 19 82 1st Q	2nd Q	3rd Q	4th Q	PLANNING YEARS FY +1	FY +2	FY +3	FY +4	FY +5
DHS	Task 04 - Staff Program Management Staff program management and technical assistance (1 unit = 1 FTE)	.6									

STD	CURRENT YEAR COST BY TASK (000's)	TOTAL	STATE	LOCAL	402	402 TO LOCAL	OTHER FED	
315	04 - Staff Program Management (personal services) (administration)	24.0	6.0		18.0			SEE PROGRAM MODULE COST SUMMARY FOR PLANNING YEARS' COSTS
	TOTALS---→	24.0	6.0		18.0			

HS Form 57 (Rev. 7/77) Replaces HS-57A, HS-212 and previous editions of HS-57 which are obsolete.

Objective 82-02-23

POLICE TRAFFIC SERVICES IMPROVEMENT

Task Narrative

Task 82-02-23-01 Police Traffic Services Management Studies

Police Traffic Services (PTS) management studies focus the principles of good business management on the PTS delivery system. In-depth analysis of existing and future PTS needs with regard to organization, administration, and operations is conducted in target communities with an overall goal of increased effectiveness.

This Task continues the survey of the quality of services in high hazard communities through the use of in-depth objective studies by outside resources. These studies determine present and future needs of a specific police department to respond adequately to its traffic problems including organizational structure, manpower needs, equipment, training, data resources, and data analysis capability.

These studies are a basis for solutions to police traffic services problems in the target communities that can lead to self-supporting STEP activities. They also provide an objective means for defining needs that cannot be supported locally and become the basis for highway safety supported STEP endeavors.

Two communities targeted for studies in Fiscal Year 1982 are Pueblo and Lakewood. This is an extension of successful studies completed in Fiscal Years 1978, 1979, 1980, and 1981 in Arvada, Thornton, Grand Junction, Colorado Springs, Fort Collins, Boulder, Wheat Ridge and Aurora. A third planned participant would be Denver for FY 1983 and FY 1984.

Task 82-02-23-02 Data Base Support (STEP/MIS)

Traffic commanders and records personnel need support with continuous updating of crash statistics and enforcement activity to better manage limited traffic enforcement resources. As crash patterns fluctuate, the STEP/MIS program provides the needed data for planning and development of these limited resources.

Cities presently on the STEP/MIS system for municipal selective enforcement support are: Aurora, Arvada, Fort Collins, Grand Junction, Pueblo, Thornton, Westminster, Golden, Englewood, Commerce City, Wheat Rdige, Northglenn, Aspen, Longmont and Pitkin County. Further plans include participation of Arapahoe County, Durango, Greeley, Colorado Springs, Glendale, Boulder, Vail, Glenwood Springs, Steamboat Springs, Breckenridge and Estes Park.

This task provides for continuation of the computer service support, through the Colorado Bureau of Investigation, for periodic meetings of involved agencies to review progress and problems, and for the training of field operating personnel for system input and use of this technique for management.

Task 82-02-23-03 Staff Program Management

Activities involved in police traffic services improvement will be managed, coordinated and evaluated by part of a staff FTE.

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PSP TITLE: Reduce Driver Behavior Crashes

PSP NO: 82-02

OBJECTIVE 23

STATE: Colorado

PAGE: 1 of 3

TASK STATEMENT: To indentify problems in PTS organizations, administration, and operations to improve effectiveness.

MILESTONES

CURRENT FISCAL YEAR 19 82

PLANNING YEARS

RESP	TASK TITLES	PLANNED QTY	1st Q	2nd Q	3rd Q	4th Q	FY +1	FY +2	FY +3	FY +4	FY +5
DHS	Task 01 - PTS Management Studies										
	01.1 Pueblo Study	1					-----				
	01.2 Lakewood Study	1					-----				
	(1 unit - 1 study completed)										

STD	CURRENT YEAR COST BY TASK (000's)	TOTAL	STATE	LOCAL	402	402 TO LOCAL	OTHER FED	
315	01 - PTS Management Studies							SEE PROGRAM MODULE COST SUMMARY FOR PLANNING YEARS' COSTS
	01.1 Pueblo	40.0			40.0	40.0		
	01.2 Lakewood (studies)	45.0			45.0	45.0		
	TOTALS---→	85.0			85.0	85.0		

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PSP TITLE	PSP NO:	STATE	PAGE
Reduce Driver Behavior Crashes	82-02	Colorado	2 of 3
	OBJECTIVE 23		

TASK STATEMENT To improve data support for use of resources in STEP endeavors.

MILESTONES

RESP	TASK TITLES	PLANNED QTY	CURRENT FISCAL YEAR 19 82 1st Q	2nd Q	3rd Q	4th Q	PLANNING YEARS FY +1	FY +2	FY +3	FY +4	FY +5
DHS	Task 02 - STEP/MIS										
	02.1 Support for cities/counties in program	15									
	02.2 Add new cities/counties to program (1 unit - 1 community in program)	11									

STD	CURRENT YEAR COST BY TASK (000's)	TOTAL	STATE	LOCAL	402	402 TO LOCAL	OTHER FED	
310	02 STEP/MIS	124.4			124.4	124.4		SEE PROGRAM MODULE COST SUMMARY FOR PLANNING YEARS' COSTS
	TOTALS---→	124.4			124.4	124.4		

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PSP TITLE	PSP NO:	STATE	PAGE
RReduce Driver Behavior Related Crashes	82-02 Objective 23	Colorado	3 of 3

Task Statement. To improve the management and effectiveness of PTS organizations.

RESP	TASK TITLES	PLANNED QTY	MILESTONES: CURRENT FISCAL YEAR 19 82 1st Q	2nd Q	3rd Q	4th Q	PLANNING YEARS FY +1	FY +2	FY +3	FY +4	FY +5
DHS	Task 03 - Staff Program Management To provide management and program coordination (1 unit = 1 FTE)	.6									

STD	CURRENT YEAR COST BY TASK (000's)	TOTAL	STATE	LOCAL	402	402 TO LOCAL	OTHER FED	
315	03 - Staff Program Management (personal services) (administration)	37.8	9.4		28.4			SEE PROGRAM MODULE COST SUMMARY FOR PLANNING YEARS' COSTS
	TOTALS---→	37.8	9.4		28.4			

HS Form 57 (Rev. 7/77) Replaces HS-57A, HS-212 and previous editions of HS-57 which are obsolete.

PROBLEM SOLUTION PLAN 82-03

IMPROVE EMERGENCY MEDICAL SERVICES DELIVERY

Objective 31 Emergency Medical Technician (EMT) Training

Task 01 Initial Training
Task 02 Refresher Training

Objective 32 Emergency Medical Services Equipment

Task 01 Quick Response Teams

Objective 33 National Emergency Aid Radio (NEAR)

Task 01 Volunteer Program

Objective 34 Program Management

Task 01 Program Management

PSP 82-03

IMPROVE EMERGENCY MEDICAL SERVICES DELIVERY

Problem Statement

In spite of our efforts at prevention, crashes do occur. Consequently, it is necessary to provide for expeditious response by skilled personnel to crashes involving injuries. Inadequacies in the system for providing statewide emergency medical services (EMS) need to be corrected and additional services provided. This plan addresses those tasks intended to rectify identified deficiencies.

Problem Solution Narrative

There are several areas where continued improvement of emergency medical services are necessary. They include the upgrading of training programs for Emergency Medical Technicians (EMTs) under Department of Health and NHTSA standards, with particular emphasis on the establishment of an Intermediate EMT Program which will upgrade EMT skills in rural communities, and on the improvement of EMT course instructor skills. Also needed are the implementation of a basic EMS training course for rural nurses, and the development and implementation of a training program in EMS for non-medical public safety dispatchers. In addition, the training and equipping of EMS Quick Response Teams (QRTs) demands a high priority for isolated communities without ready access to existing emergency medical care resources, especially those in major highway corridors. Depending on the resources available, five QRTs will be established with equipment acquisition to be limited to those items essential to deliver EMS in priority areas that are currently poorly served by EMS.

Field communication is an important ingredient in the timely and adequate delivery of emergency medical services. Centralized emergency dispatch capability is a proven countermeasure in reducing response time. An emergency dispatch network can be complemented by 911 emergency telephone access, common radio frequencies for EMS coordination and citizen access through the National Emergency Aid Radio (NEAR) system. Only about 15 percent of the geography of Colorado is covered by the 911 system. Efforts must continue to expand 911, seven digit emergency access, and the expansion of volunteer NEAR capabilities. Part of an FTE will be dedicated to manage, coordinate, and provide technical assistance to State and local agencies.

Evaluation Plan

Effectiveness of EMS will be evaluated on the basis of predetermined standards set by the DHS in consultation with the Colorado Department of Health. These will include the development of an analysis of (1) emergency response times, and (2) any significant relationship between relative availability of EMS, and injury severity and fatality rates. NEAR will continue to be evaluated on the basis of achievement of administratively established predetermined milestones and objectives.

Objective 82-03-31

EMERGENCY MEDICAL TECHNICIAN (EMT) TRAINING

Task Narratives

Task 82-03-31-01 Initial Training

Colorado has established a formal mechanism for the training and certification of Emergency Medical Technicians (EMTs) and Paramedics, and their continuing education and periodic recertification.

Since the inception of the State's EMT training and certification program in 1969, more than 13,500 EMTs and 450 Paramedics have been trained and certified in Colorado. At the present time, there are some 4,500 active EMTs in the State, over 90 percent of whom are volunteers, and some 300 active Paramedics. The purpose of the State's EMT training and certification program is to provide high-quality emergency medical care under field conditions to victims of acute illness and highway crash trauma.

During FY 1982, it is anticipated that support will be given in the following areas:

EMT Instructor Training - A training program to enable EMT instructors to teach effectively and to make appropriate presentations of medical knowledge will be developed. This program will be organized using existing curricula, modified as necessary, for emergency medical training and for the training of rural-based volunteer EMT instructors.

Rural Nurse EMS Training - A short training course in basic emergency medical procedures for rural nurses is in the planning stages. In most rural hospitals in Colorado a nurse is the only medical person immediately available to handle trauma victims. Unfortunately, few rural nurses have received training in the handling of emergency cases; a critical deficiency when the presence of an "on call" physician may necessitate a wait of thirty minutes or more. The problem is compounded by the difficulty most rural nurses have in getting away from their communities for any length of time to acquire essential emergency medical training. Recognizing this problem, a rural nurse EMS training course will be developed for presentation as a modular extension course. It will be followed up by short (one or two day) intensive review and evaluation sessions. The effective development of the rural nurse EMS training program will require a pilot project. The course will be field tested and modified as may be necessary before implementation.

Dispatcher EMS Training - While considerable attention has been given to the development of EMS dispatcher training programs, including the NHTSA dispatcher course, a major need remains to train general purpose public safety dispatchers in the elementary aspects of medical emergencies and EMS dispatching. In Colorado, the great majority of

emergency medical calls outside of the Denver area are not handled by EMS dispatchers, but by general purpose public safety dispatch points. It is not realistic to expect general public safety dispatchers to take the intensive training existing EMS dispatcher training programs require. A crucial need thus exists to provide them with very basic training in EMS. A dispatcher EMS training course will be developed by the Department of Health, in cooperation with the professional communications and dispatcher association and law enforcement and fire protection agencies.

Intermediate EMT Training - Recognizing that many rural communities have a pressing need for emergency pre-hospital care skills and capabilities beyond those of the Basic EMT, the Department of Health has initiated development of an Intermediate EMT classification and training program. The Intermediate EMT (EMT-I) program involves providing selected Basic EMTs with training in the most fundamental of the advanced emergency medical care skills practiced by Paramedics. A forty to fifty hour course which focuses on the use of intravenous therapy, anti-shock trousers, improved airway management and shock therapy, and physical assessment skills will be designed. During 1980-81, the Department of Health conducted three pilot Intermediate EMT training programs and initiated the formal changes in State regulations to establish the new class. Formal EMT-I training and certification will commence in FY 1982.

Task 82-03-31-02 Refresher Training

This is an ongoing program to comply with NHTSA and Department of Health standards to insure that only fully qualified personnel respond to emergency situations. This task provides for refresher training and recertification for EMT-A, EMT-I and EMT-P trained individuals as needed on a cyclical basis.

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U.S. DEPARTMENT OF TRANSPORTATION
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PROBLEM SOLUTION PLAN (PSP)

O.M.B. No. 004-R2439
Approval Expires August 1982

PSP TITLE: Improve Emergency Medical Services Delivery

PSP NO: 82-03
Objective 31

STATE: Colorado

PAGE: 1 of 1

OBJECTIVE(S): To provide for training of Emergency Medical Technicians

MILESTONES

RESP	TASK TITLES	PLANNED QTY	CURRENT FISCAL YEAR 19 82 1st Q	2nd Q	3rd Q	4th Q	PLANNING YEARS FY +1	FY +2	FY +3	FY +4	FY +5
CDH	Task 01 - Initial Training										
	(1 unit = 1 annual review visit)	12									
	(1 unit = 1 instructor/coordinator trnd.)	50									
	(1 unit = 1 EMT Basic trained)	1500									
	(1 unit = 1 EMT Intermedicate trained)	100									
	(1 unit = 1 paramedic trained)	75									
	02 - Refresher Training										
	(1 unit = 1 EMT Basic recertified)	1000									
	(1 unit = 1 Paramedic recertified)	200									

STD	CURRENT YEAR COST BY TASK (000's)	TOTAL	STATE	LOCAL	402	402 TO LOCAL	OTHER FED	
311	Task 01 Initial Training (training materials) (manpower training) (administration)	12.5			12.5			SEE PROGRAM MODULE COST SUMMARY FOR PLANNING YEARS' COSTS
	02 Refresher Training (training materials) (manpower training) (administration)	5.0			5.0			
	TOTALS----→	17.5			17.5			

HS Form 57 (Rev 7/77) Replaces HS-57A, HS-212 and previous editions of HS-57 which are obsolete.

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Objective 82-03-32

EMERGENCY MEDICAL SERVICES EQUIPMENT

Task Narrative

Task 82-03-32-01 Quick Response Teams

Many rural Colorado communities that are located considerable distances from hospital facilities lack ambulance services. These include communities along major highway travel corridors which carry high volumes of transit and tourist vehicular traffic. Victims of highway crashes and other life threatening situations in rural areas often must endure an agonizingly long period of time before an ambulance can be summoned to the scene and effective emergency medical care provided. Many fail to survive this intermediate waiting period, which often exceeds a half hour, while others suffer increased disability because of the delays in receiving help.

To help overcome this problem, the State has embarked on the development of rural Emergency Medical Quick Response Teams (QRTs). The Colorado QRT concept involves training rural community volunteers as Emergency Medical Technicians (EMTs) and equipping them with basic medical and limited extrication equipment to permit them to function as emergency medical response teams. The intent is to have the QRT stabilize and maintain a crash or illness victim's life at the scene until a ground or aerial ambulance can arrive to provide more sophisticated care and transport the victim to the hospital. The Colorado QRT concept calls for a team to be trained and equipped in a manner similar to a Basic Life Support ambulance crew, except that they will not be equipped with an ambulance vehicle and related equipment.

There are more than twenty-five communities in Colorado where QRTs may be necessary, and the number may grow as smaller communities find it increasingly difficult to cover the costs of maintaining ambulance vehicles. During FY 1982, it is anticipated that five QRT equipment sets will be funded, including medical equipment, basic portable radio gear, and basic extrication equipment. Required EMT training will be provided by existing training mechanisms.

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PSP TITLE: Improve Emergency Medical Services Delivery

PSP NO: 82-03
Objective 32

STATE: Colorado

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OBJECTIVE(S): EMS equipment to establish Quick Response Teams in rural communities which have no readily available EMS services

MILESTONES

RESP	TASK TITLES	PLANNED QTY	CURRENT FISCAL YEAR 19 82 1st Q	2nd Q	3rd Q	4th Q	PLANNING YEARS FY +1	FY +2	FY +3	FY +4	FY +5
CDH	Task 01 - Quick Response Teams (1 unit = 1 Quick Response Team, trained and equipped)	5									

STD	CURRENT YEAR COST BY TASK (000's)	TOTAL	STATE	LOCAL	402	402 TO LOCAL	OTHER FED	
311	01 EMS Equipment (manpower training) (equipment) (administration)	50.0			50.0	50.0		SEE PROGRAM MODULE COST SUMMARY FOR PLANNING YEARS' COSTS
	TOTALS---→	50			50.0	50.0		

III-50

HS Form 67 (Rev. 7/77) Replaces HS-57A, HS-212 and previous editions of HS-67 which are obsolete.

Objective 82-03-33

NATIONAL EMERGENCY AID RADIO (NEAR)

Task Narrative

Task 82-03-33-01 Volunteer Program

This task is designed to coordinate and encourage the effective use of the vast citizen's band radio communications network with those of the Colorado State Patrol, local law enforcement agencies, fire departments, and Emergency Medical Services. The goal is to reduce response times in traffic emergency situations.

The NEAR pilot program has been successfully expanded to Mesa County. Coordination efforts in both El Paso and Mesa Counties have shown continued interest and support for the program on the part of community leaders.

The El Paso County Program has been in existence for a longer period of time and consequently several activity ideas that were thought to be good and were incorporated early into the program have been modified or eliminated. Examples in the latter category include the segmentation of the program into crime watch, weather watch, and traffic safety. The program is now focused specifically on traffic safety.

The statewide program plan has been completed, including planning for continuous public information, education, monitor screening, and evaluation. Thirty CB radios will be purchased and placed in Colorado State Patrol cars used in the involved counties. This is a needed step to insure the existence of the program.

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O.M.B. No. 004-R2439
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PSP TITLE: Improve Emergency Medical Services Delivery

PSP NO: 82-03
Objective 33

STATE: Colorado

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OBJECTIVE(S): To develop three volunteer NEAR programs by 9/30/82

MILESTONES

RESP	TASK TITLES	PLANNED QTY	CURRENT FISCAL YEAR 19 82 1st Q	2nd Q	3rd Q	4th Q	PLANNING YEARS FY +1	FY +2	FY +3	FY +4	FY +5
DHS	Task 01 - Volunteer Program (1 unit = 1 new volunteer program) (1 unit = 1 FTE for program coordination)	3 .3					- - -				

STD	CURRENT YEAR COST BY TASK (000's)	TOTAL	STATE	LOCAL	402	402 TO LOCAL	OTHER FED	
311	01 Volunteer Program (personal services) (equipment) (administration)	15.0			15.0			SEE PROGRAM MODULE COST SUMMARY FOR PLANNING YEARS' COSTS
	TOTALS---->	15.0			15.0			

HS Form 57 (Rev. 7/77) Replaces HS-57A, HS-312 and previous editions of HS-57 which are obsolete.

III-52

Objective 82-03-34

PROGRAM MANAGEMENT

Task Narrative

Task 82-03-34-01 Program Management

Activities involved in addressing Emergency Medical Services will be managed, coordinated and technical assistance will be provided to State and local agencies by 40 percent of the time of one FTE. A State EMT Training Field Coordinator will also be supported for providng regular and frequent technical assistance and quality control to EMT training programs around the State.

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PSP TITLE: Improve Emergency Medical Services Delivery

PSP NO: 82-03
Objective 34

STATE: Colorado

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OBJECTIVE(S): To coordinate Emergency Medical Services Program

MILESTONES

RESP	TASK TITLES	PLANNED QTY	CURRENT FISCAL YEAR 19 82 1st Q	2nd Q	3rd Q	4th Q	PLANNING YEARS FY +1	FY +2	FY +3	FY +4	FY +5
DHS	Task 01 - Program Management										
	(1 unit = 1 FTE)	.40									
	(1 unit = 1 EMT Coordinator)	1									

STD	CURRENT YEAR COST BY TASK (000's)	TOTAL	STATE	LOCAL	402	402 TO LOCAL	OTHER FED	
311	01 Program Management (personal services) (administration)	51.2	5.3		45.9			SEE PROGRAM MODULE COST SUMMARY FOR PLANNING YEARS' COSTS
	TOTALS---->	51	5.3		45.9			

HS Form 67 (Rev. 7/77) Replaces HS-67A, HS-212 and previous editions of HS-67 which are obsolete.

PROBLEM SOLUTION PLAN 82-04

IMPROVE TRAFFIC RECORDS SYSTEM

Objective 41 Improve Traffic Records

Task 01 Safety Program Files
Task 02 State Traffic Records Advisory Committee (STRAC)

Objective 42 Provide Data Support

Task 01 National Accident Sampling System (NASS)

PSP 82-04

IMPROVE TRAFFIC RECORDS SYSTEM

Problem Statement

All aspects of the Colorado highway safety problem (number of licensed drivers, vehicles, road miles, vehicle miles traveled, types of vehicles, modes and reasons for travel) are changing over time at a perceptible rate. Because of the dramatic increases in the cost of gasoline in the last six years and the threat of limited availability in the future, and because of strong inflationary and economical pressures, we are seeing some changes in modes of transportation. Motorcycles, mopeds, and bicycles are being used increasingly for recreation and by commuters. There is a higher percentage of small cars in the vehicle population and an increase in the average weight of trucks. At the same time, suburban population is increasing creating a need for more van and car pooling, and mass transit.

While there is some predictability to each of these changing aspects, the planning function requires feedback. Thinking and planning for the future are dynamic activities that must be closely related to current reality. Managers within the Division of Highway Safety have the need for necessary information for effective decision making. Programs must be timely, well-planned, properly executed, and evaluated if they are to lead to better, more cost effective, future programs that are now in their planning stages. The Traffic Records PSP must provide the resources to meet these needs.

Specific items of concern are as follows:

- Continued analysis of programs that were implemented in the past. This analysis must have as a foundation the State's several crash data bases.

- Data availability and recovery in usable form is poor in most areas of highway safety. This is illustrated by the informational level of some of the data presented in this plan. The lack of availability of these data in a form amenable to analysis hinders management decision making. Program decisions are made on the basis of Federal mandates and what seems to be reasonable. By saying this, it is not intended to indicate that present programs and countermeasures are ineffective, in fact they may be very near optimal. But with the rapidly changing environment and limited analysis capabilities, arbitrary decision making where it is done, has the very real potential for decreasing the benefits achieved by the highway safety effort.

Problem Solution Narrative

The Division of Highway Safety will continue in the role as the State Highway Safety Agency responsible for highway safety as identified in the State statutes as well as in Colorado Highway Department Policy Directive #800. The Division will continue to manage with the objective of improved usefulness of management information systems.

The quality of information and data provided to managers must be improved as well. This effort should carry over into other agencies (State and local) and yield more effective management of time and resources in areas of highway safety.

More specific characteristics of data and information problem solutions are as follows:

- To continue the evaluation, design and support of crash data bases with emphasis on dynamic and manipulative usefulness of data forms. Data that is more amenable to manipulation and consequently to interpretation is needed for the specific and the broader gauge analyses of safety programs.

- To continue to provide administrative support for the State Traffic Records Advisory Committee (STRAC) in an effort to influence plans and the use of analytical tools by other agencies.

- To continue the development of the present traffic safety program management files and update the system where possible.

- To continue to improve the analysis of all crashes for roadway related causative factors.

- To continue support, as needed, for the National Accident Sampling System (NASS).

Evaluation Plan

The evaluation of this particular PSP will be done on the administrative level. In administrative tasks, and where we are improving system support areas, the primary measure of success will be based on efficiency, cost of operation prior to any new programs, and increased management use of data base systems for decisions which will potentially allow for the reallocation of resources to more productive areas.

Objective 82-04-41

IMPROVE TRAFFIC RECORDS

Task Narratives

Task 82-04-41-01 Safety Program Files

This Task is a continuation of the effort to support and reorganize the Division of Highway Safety files containing statistical data from various State and local agencies concerning highway safety. Data from the Department of Revenue lacks critical information that could be applied as normalizing data on a city-by-city or county-or-county basis. Statewide analysis of youthful driver overinvolvement in traffic crashes can still yield information that will be useful, but only on a trend analysis basis. The Department of Revenue has indicated that information relating to driver education and improvement experiences may be added to driver histories in the near future. This concept coupled with the new Investigating Officer's Accident Report Form should yield a more productive data base. Part of a staff FTE is included.

Task 82-04-41-02 State Traffic Records Advisory Committee (STRAC)

Administrative and financial support for STRAC is a continuing effort for FY 1982. The committee is responsible for input to monitoring and improvement of the states traffic records system.

Having achieved its goal of implementing a newly formated accident report form 1-1-81, the committee has undertaken the task of revising the standard summary, which coincides with data collected from the accident form.

After successful pilot program in Jefferson County with uniform traffic citations, plans are being formulated to further encourage promotion for statewide adoption of a uniform traffic ticket system.

The Committee has also begun discussions on development and implementation of an integrated and comprehensive traffic records system. The project will begin by compiling a catalog of all existing traffic record systems in the State.

In addition, the STRAC will review the ADIP report, from NHTSA and FHWA to find ways to integrate these recommendations in the State Traffic Record System. It is anticipated this ADIP report, along with on-going endeavors in data systems will enhance the State capabilities toward the eventual goal of an integrated system.

This Task provides support for STRAC meetings, seminars and incidental support.

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NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
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PSP TITLE	PSP NO:	STATE	PAGE
Improve Traffic Records System	82-04 Objective 41	Colorado	1 of 1

OBJECTIVE(S): To improve traffic records

RESP	TASK TITLES	PLANNED QTY	MILESTONES: CURRENT FISCAL YEAR 19 82 1st Q	2nd Q	3rd Q	4th Q	PLANNING YEARS FY +1	FY +2	FY +3	FY +4	FY +5
DHS	Task 01 Safety Program Files (1 unit = 1 program) (1 unit = 1 FTE)	1 .70									
	Task 02 STRAC (1 unit = 1 committee activity)	6									

STD	CURRENT YEAR COST BY TASK (000's)	TOTAL	STATE	LOCAL	402	402 TO LOCAL	OTHER FED	
310	01 Safety Program Files (Administration)	127.0	6.7		120.3			SEE PROGRAM MODULE COST SUMMARY FOR PLANNING YEARS' COSTS
	02 STRAC (Administration)	20.0			20.0			
	TOTALS---→	147.0	6.7		140.3			

09-III-60

HS Form 57 (Rev. [illegible]7) Replaces HS-57A, HS-212 and previous editions of HS-57 which are obsolete.

Objective 82-04-42

PROVIDE DATA SUPPORT

Task Narratives

Task 82-04-42-01 National Accident Sampling System (NASS)

The primary objectives of NASS are to:

- Estimate and disseminate annual, national totals and rates of accidents and exposure, accident causes, and consequences at a level of detail not currently available,
- evaluate existing countermeasures, motor vehicle safety standards, and highway safety program standards,
- provide data during the field test or demonstration phase of proposed standards and countermeasures to assist in evaluating their likely accident and injury reducing benefit,
- provide a current and detailed accident and injury causation data base suitable for establishing priorities for and assisting in the design of future countermeasures, and
- monitor changes and trends in the highway safety environment.

In Colorado, a contract has been awarded to Applied Science Associates, Inc., to set up a primary sampling unit. The DHS has agreed to provide the following support in this endeavor:

- assistance in securing full cooperation from the State and community agencies to be involved in this project (e.g., Colorado State Patrol, local police departments, hospitals, etc.),
- access to any of our data files and reports that may be of bearing on this study, and
- assistance in securing media coverage of the NASS project.

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PSP TITLE	PSP NO:	STATE	PAGE
Improve Traffic Records System	82-04 Objective 42	Colorado	1 of 1

OBJECTIVE(S): To improve support to data users.

MILESTONES

RESP	TASK TITLES	PLANNED QTY	CURRENT FISCAL YEAR 19 82 1st Q	2nd Q	3rd Q	4th Q	PLANNING YEARS FY +1	FY +2	FY +3	FY +4	FY +5
DHS	Task 01 NASS (1 unit = 1 program supported)	1									

STD	CURRENT YEAR COST BY TASK (000's)	TOTAL	STATE	LOCAL	402	402 TO LOCAL	OTHER FED	
310	01 NASS (Administration)	1.0			1.0			SEE PROGRAM MODULE COST SUMMARY FOR PLANNING YEARS' COSTS
	TOTALS---→	1.0			1.0			

HS Form 57 (Rev. 7-81) Replaces HS-57A, HS-212 and previous editions of HS-57 which are obsolete.

PROBLEM SOLUTION PLAN 82-05

REDUCE ROADWAY RELATED CRASHES

Objective 51 Improve Safety

- Task 01 Hazardous Locations
- Task 02 Inventory of Signs and Signals
- Task 03 Roadway Design and Improvement
- Task 04 Fatal Crash Site Investigation

Objective 52 Improve Traffic Engineering Services

- Task 01 Urban Traffic Engineering Studies
- Task 02 Rural Traffic Engineering Studies

Objective 53 Support Management

- Task 01 Staff Technical Assistance
- Task 02 Traffic Engineering Training

PSP 82-05

REDUCE ROADWAY RELATED CRASHES

Problem Statement

Unforgiving roadway features contribute to injury severity in a direct and climactic way. More than half of all reported one vehicle crashes result from running off of the roadway. The severity of these crashes can be reduced by identifying problem locations and making roadside improvements on the state/federal system and in concerned communities. This effort must include all personnel of the Department of Highways as well as local traffic engineers.

Problem Solution Narrative

The problem solution involves a two-pronged thrust at problem specification and analysis. First, it is essential that hazardous locations be identified and analyzed. Construction projects or design improvements must be analyzed and proposed in a timely manner. It is imperative that safety improvements be given priority and consideration in every roadway improvement or renovation effort. Those that are implemented must be monitored to ensure that improvements are cost effective.

The second of the two-pronged thrust must be a wide ranging search for roadway safety projects that are feasible. The responsibility for this search must involve local officials throughout the State. A continuing series of traffic engineering studies blanketing the State, involving cities, counties, and groups of counties is envisioned. These studies will focus on defining and finding local solutions to traffic problems, inventorying signs and signals, identifying hazardous locations, and recommending priorities and proposed solutions.

To implement this approach, certain support elements are necessary. Most important is overall coordination of the effort and technical assistance. The latter is necessitated by the fact that there is little technical and professional traffic engineering capability in the small towns and rural areas of the State. Also required is some training for individuals who have local responsibility for traffic engineering. Department of Highways maintenance personnel and State Patrolmen will receive training in identification of roadside obstacles.

Evaluation Plan

The activities of this PSP will be evaluated administratively against predetermined standards until the effects of the programs can be seen in the crash data. At that point (perhaps several years) analytical evaluation involving cost/benefit ratios and analytical model assumptions will play the major role in judging whether or not the programs of this PSP support the achievement of the Highway Safety Program objectives satisfactorily.

Objective 82-05-51

IMPROVE SAFETY

Task Narrative

Task 82-05-51-01 Hazardous Locations

This Task will provide support for District Engineers to help them utilize the new hazardous location determination system. This system was recently expanded to include information on crash severity. District Engineers will receive direct assistance in the selection of safety projects based on overall economic impact on the driving public. Selection of such projects has been based on simpler, less appropriate criteria in the past.

Task 82-05-51-02 Inventory of Signs and Signals

Smaller communities need assistance to establish and maintain traffic control device inventories. Such an inventory makes possible the effective management of traffic related resources within a community, and reduces the community's susceptibility to liability suits. Inventory kits have been developed and will be made available to interested communities. These kits are easy to use whether one is establishing or monitoring a traffic control device inventory.

Task 82-05-51-03 Roadway Design and Improvement

This task will incorporate safety considerations and considerations of compliance with adopted national and State standards for traffic control devices and roadway features in the design, construction, and maintenance of Colorado Federal Aid and off-system roadways. This incorporation will reduce the incidence of or severity of crashes. Designers' input will be provided to review the recommendations from traffic engineering studies (see Objective 82-05-52) and complaints from local officials and private citizens on spot location problems. This task will also include inspecting, reviewing, and recommending improvements in construction project signing, flagging, and traffic control. Evaluation will be based on predetermined administrative standards.

Task 82-05-51-04 Fatal Crash Site Investigation

This task has as its ultimate objective the analysis of roadway features and roadside obstacles that contribute to the fatalities on our highway system so that programs to reduce these traumas can be effectively designed. To achieve an adequate analysis, selected fatal crash sites must be investigated in detail. At present, most fatal crashes are blamed on driver error. It is plausible that many crashes are actually caused by initial driver miscalculation, confusion with physical features (or signs or markings), or a momentary lapse in thought processes. Running off the road, or being forced off, should not necessarily result in high mortality.

This task will provide training of field investigation personnel. It will also provide support for data collection, and further analysis by Division of Highway Safety and the Division of Highways.

Adoption of Highway Department Policy and Procedural Directives will initiate this endeavor.

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PSP TITLE	PSP NO:	STATE	PAGE
Reduce Roadway Related Crashes	82-05 Objective 51	Colorado	1 of 4

OBJECTIVE(S): To improve safety features and identify hazardous problems on roadways

MILESTONES

RESP	TASK TITLES	PLANNED QTY	CURRENT FISCAL YEAR 19 82 1st Q	2nd Q	3rd Q	4th Q	PLANNING YEARS FY +1	FY +2	FY +3	FY +4	FY +5
DOH	Task 01 - Hazardous Locations (1 unit = 1 data system supported)	1									

STD	CURRENT YEAR COST BY TASK (000's)	TOTAL	STATE	LOCAL	402	402 TO LOCAL	OTHER FED	
609	01 Hazardous Locations (personal services) (studies/surveys) (administration)	204.0	94.0		110.0			SEE PROGRAM MODULE COST SUMMARY FOR PLANNING YEARS' COSTS
	TOTALS---→	204.0	94.0		110.0			

HS Form 67 (Rev. 7/77) Replaces HS-67A, HS-212 and previous editions of HS-67 which are obsolete.

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PSP TITLE	PSP NO:	STATE	PAGE
Reduce Roadway Related Crashes	82-05 Objective 51	Colorado	2 of 4

OBJECTIVE(S): To improve safety features and identify hazardous problems on roadway

MILESTONES

RESP	TASK TITLES	PLANNED QTY	CURRENT FISCAL YEAR 19 82 1st Q	2nd Q	3rd Q	4th Q	PLANNING YEARS FY +1	FY +2	FY +3	FY +4	FY +5
DOH	Task 02 - Inventory of Signs and Signals (1 unit = 1 inventory system provided to community)	10									

STD	CURRENT YEAR COST BY TASK (000's)	TOTAL	STATE	LOCAL	402	402 TO LOCAL	OTHER FED	
613	02 Inventory of signs and signals (administration)	2.5			2.5	2.5		SEE PROGRAM MODULE COST SUMMARY FOR PLANNING YEARS' COSTS
	TOTALS----→	2.5			2.5	2.5		

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PSP TITLE: Reduce Roadway Related Crashes

PSP NO: 82-05
Objective 51

STATE: Colorado

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OBJECTIVE(S): To improve safety features and identify hazardous problems on roadways

MILESTONES

RESP	TASK TITLES	PLANNED QTY	CURRENT FISCAL YEAR 19 82 1st Q	2nd Q	3rd Q	4th Q	PLANNING YEARS FY +1	FY +2	FY +3	FY +4	FY +5
DHS	Task 03 Roadway Design and Improvement (1 unit = 1 study or review)	12									

STD	CURRENT YEAR COST BY TASK (000's)	TOTAL	STATE	LOCAL	402	402 TO LOCAL	OTHER FED	
612	03 Roadway Design and Improvement (study)	10.0			10.0			SEE PROGRAM MODULE COST SUMMARY FOR PLANNING YEARS' COSTS
	TOTALS---→	10.0			10.0			

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PSP TITLE: Reduce Roadway Related Crashes

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OBJECTIVE(S): To improve safety features and identify hazardous problems on roadways

MILESTONES

CURRENT FISCAL YEAR 19 82 | PLANNING YEARS

RESP	TASK TITLES	PLANNED QTY	1st Q	2nd Q	3rd Q	4th Q	FY +1	FY +2	FY +3	FY +4	FY +5
DHS	Task 04 - Fatal Crash Site Investigation (1 unit = 1 system developed and implemented)	1									

STD	CURRENT YEAR COST BY TASK (000's)	TOTAL	STATE	LOCAL	402	402 TO LOCAL	OTHER FED	
609	04 Fatal Crash Site Investigation (manpower training) (administration)	2.0			2.0			SEE PROGRAM MODULE COST SUMMARY FOR PLANNING YEARS' COSTS
	TOTALS---→	2.0			2.0			

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Objective 82-05-52

IMPROVE TRAFFIC ENGINEERING SERVICES

Task Narrative

Task 82-05-52-01 Urban Traffic Engineering Studies

This task will continue the effort to upgrade substandard control devices and roadway features by conducting engineering studies for local governments.

It is anticipated that two communities will begin traffic engineering studies in FY 1982. Wheat Ridge and Sheridan have previously been identified as high impact areas. Depending on availability of resources and the interest demonstrated by concerned personnel in the respective cities, these studies will be started in FY 1982.

Task 82-05-52-02 Rural Traffic Engineering Studies

This task will be a continuation of previous efforts oriented toward bringing rural communities into compliance with minimum standards of uniformity in traffic management. The work will be done by the Traffic Engineering Staff of the Division of Highway Safety.

Studies will be conducted in smaller towns and cities based upon high hazard priority lists and requests for assistance. These low-cost efforts will entail reviews of crash data, hazardous locations, and signs and signals.

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PSP TITLE	PSP NO:	STATE	PAGE
Reduce Roadway Related Crashes	82-05 Objective 52	Colorado	1 of 2

OBJECTIVE(S): To improve local traffic engineering capabilities

MILESTONES

RESP	TASK TITLES	PLANNED QTY	CURRENT FISCAL YEAR 19 82 1st Q	2nd Q	3rd Q	4th Q	PLANNING YEARS FY +1	FY +2	FY +3	FY +4	FY +5
DHS	Task 01 - Urban Traffic Engineering Studies										
	01.1 City of Wheat Ridge (1 unit = 1 study completed)	1									
	01.2 City of Sheridan (1 unit = 1 study completed)	1									

STD	CURRENT YEAR COST BY TASK (000's)	TOTAL	STATE	LOCAL	402	402 TO LOCAL	OTHER FED	
613	01.1 Wheat Ridge Traffic Engineering Study	66.0			66.0	66.0		SEE PROGRAM MODULE COST SUMMARY FOR PLANNING YEARS' COSTS
613	01.2 Sheridan Traffic Engineering Study (study)	17.0			17.0	17.0		
	TOTALS---→	83.0			83.0	83.0		

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PSP TITLE: Reduce Roadway Related Crashes

PSP NO: 82-05
Objective 52

STATE: Colorado

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OBJECTIVE(S): To improve local traffic engineering capabilities

MILESTONES

CURRENT FISCAL YEAR 19 82 | PLANNING YEARS

RESP	TASK TITLES	PLANNED QTY	1st Q	2nd Q	3rd Q	4th Q	FY +1	FY +2	FY +3	FY +4	FY +5
DHS	Task 02 - Rural Traffic Engineering Studies (1 unit = 1 study completed)	4									

STD	CURRENT YEAR COST BY TASK (000's)	TOTAL	STATE	LOCAL	402	402 TO LOCAL	OTHER FED	
613	02 Rural Traffic Engineering Studies (study)	8.0			8.0	8.0		SEE PROGRAM MODULE COST SUMMARY FOR PLANNING YEARS' COSTS
	TOTALS---→	8.0			8.0	8.0		

HS Form 57 (Rev. 7/77) Replaces HS-57A, HS-212 and previous editions of HS-57 which are obsolete.

Objective 82-05-52

SUPPORT MANAGEMENT

Task Narrative

Task 82-05-53-01 Staff Technical Assistance

The Division of Highway Safety must have permanent technical personnel to provide staff assistance in the development, implementation, and management of traffic engineering activities, and to monitor all other safety related activities involved in safety improvement, construction, and maintenance operations.

This task for two FTEs is also intended to fulfill the need for engineering assistance to all Division of Highway Safety personnel and provide technical assistance support for county/municipal engineers.

Many rural communities are still not in substantial compliance with national and state standards for traffic control and roadway design. This task is oriented toward bringing rural communities into compliance with minimum standards of uniformity through surveys using Department of Highways engineering personnel.

In addition, the engineering staff will constantly review the present roadway system to identify hazardous locations and help prioritize safety construction projects. There will be an emphasis on using the most cost effective techniques and solutions.

Task 82-05-53-02 Traffic Engineering Training

The need for an understanding of the basic concepts of traffic engineering by those individuals charged with, but not professionally trained or licensed to act in the capacity of a traffic engineer has been long recognized. Indications from the training effort of FY 1980 and FY 1981 are that there is a growing interest and an increased willingness on the part of municipal and county officials to send representatives to this type of training. One workshop was conducted in FY 1979, two were conducted in FY 1980, and one in FY 1981.

Depending on the interest and background of potential participants, the curriculum for the FY 1982 training sessions will address similar or more advanced traffic engineering concepts to those addressed in the past.

In addition, a training program for the identification of roadside obstacles is planned for Highway Department maintenance personnel and State Patrol Troopers. The need for a clear roadside recovery area cannot be overemphasized. Unless maintenance personnel and Patrol Troopers are made aware of what constitutes a roadside hazard, little or no change can be expected in this roadside environment.

These training sessions will include specific topics as follows:

- definition of legitimate roadside hazards (trees, fences, etc.),
- acceptable standards for each obstacle (distance from roadway, breakaway design, etc.),
- crash statistics related to obstacles, and
- recent developments in technology related to sign posts, guard rails, etc.

Three training sessions of this type are planned for FY 1982.

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PSP TITLE	PSP NO:	STATE	PAGE
Reduce Roadway Related Crashes	82-05 Objective 53	Colorado	1 of 2

OBJECTIVE(S): To provide support, management and technical assistance

MILESTONES

RESP	TASK TITLES	PLANNED QTY	CURRENT FISCAL YEAR 1982 1st Q	2nd Q	3rd Q	4th Q	PLANNING YEARS FY +1	FY +2	FY +3	FY +4	FY +5
DHS	Task 01 - Staff Technical Assistance										
	(1 unit = 1 FTE)	2.4									
	(1 unit = 1 Technical/Assistance Activity)	200									

STD	CURRENT YEAR COST BY TASK (000's)	TOTAL	STATE	LOCAL	402	402 TO LOCAL	OTHER FED	
613	01 Staff Technical Assistance (personal services) (administration)	103.6	6.5		97.1			SEE PROGRAM MODULE COST SUMMARY FOR PLANNING YEARS' COSTS
	TOTALS---->	103.6	6.5		97.1			

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PSP TITLE: Reduce Roadway Related Crashes

PSP NO: 82-05
Objective 53

STATE: Colorado

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OBJECTIVE(S): To provide support, management and technical assistance

MILESTONES

CURRENT FISCAL YEAR 19 82 | PLANNING YEARS

RESP	TASK TITLES	PLANNED QTY	1st Q	2nd Q	3rd Q	4th Q	FY +1	FY +2	FY +3	FY +4	FY +5
DHS	Task 02 - Traffic Engineering Training										
	(1 unit = 1 Traffic Engineering Workshop)	4									
	(1 unit = 1 workshop)	6									

STD	CURRENT YEAR COST BY TASK (000's)	TOTAL	STATE	LOCAL	402	402 TO LOCAL	OTHER FED	
613	02 Traffic Engineering Training (Training materials) (Manpower training) (Administration)	13.3			13.3	5.3		SEE PROGRAM MODULE COST SUMMARY FOR PLANNING YEARS' COSTS
	TOTALS---→	13			13.3	5.3		

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PROBLEM SOLUTION PLAN 82-06

PROVIDE DRIVER AND MOTORCYCLE SAFETY EDUCATION

Objective 61 Educate Young Drivers

- Task 01 Driver Education
- Task 02 Motorcycle Safety Education
- Task 03 Program Management

PSP 82-06

PROVIDE DRIVER AND MOTORCYCLE SAFETY EDUCATION

Problem Statement

Drivers 16-25 years old are involved in more than their share of vehicle crashes (see Table 2.2.1.2.1 in Section II). These drivers represent almost 26 percent of the driving population, but as the following table shows, such drivers have much more than their share of violations.

TOP TEN VIOLATIONS BY TYPE
FOR 16-25 YEAR OLD DRIVERS

TYPE OF VIOLATION	TOTAL # VIOLATIONS (ALL DRIVERS)	# OF VIOLATIONS YOUTHFUL DRIVERS	% OF TOTAL
Speeding (10-19 over)	208,683	70,892	34
Failure to Comply w/ Inspection Law	70,260	24,560	35
Speeding (0-9 over)	43,108	16,253	38
Careless Driving	31,411	16,006	51
Defective Vehicle	20,722	9,137	44
No Operator License (NOL)	19,843	10,001	50
Violation-Red Signal	18,777	7,710	41
Stop Sign Violation	14,917	6,452	43
DUI	12,919	3,617	28
Speeding (20 and more)	9,513	4,910	52

Source: DOR, Annual Statistical Report

While motorcycle fatalities continue on a downward trend, one of the greatest hazards to motorcyclists continues to be other motorists. The most prevalent comment made by those motorists involved in an automobile/ motorcycle crash is that the motorcycle was not seen.

Problem Solution Narrative

Youth involvement in crashes can be reduced through age group targeted educational programs and activities. The plan is to support traffic safety educational efforts. Proper attitudes, crash avoidance, and traffic related skills are emphasized. Motorcycle visibility can be heightened by promoting a motorcycle awareness program. Additionally, educational seminars can be held to encourage instructors to address this issue through films available on the topic. In order to accomplish

these activities, part of an FTE will be dedicated to manage, coordinate, and provide technical assistance to State and local agencies.

Evaluation Plan

To establish causality between this program and a reduction in crash statistics, crash trend data will be related to an analytical model of crash involvement. Administrative evaluation will be carried out to assess achievement or non-achievement of specific predetermined milestones established for the particular task.

Objective 82-06-61

EDUCATE YOUNG DRIVERS

Task Narrative

Task 82-06-61-01 Driver Education

Traffic safety resources of schools will be maintained through the publication of newsletters, special technical bulletins, resource lists, and the distribution of appropriate instructional media. School districts offering programs will be provided with timely information and materials designed to maintain the quality and efficiency of their programs. Informational mailings will be distributed to superintendents, principals, and all approved driver education instructors, with instructional materials being provided through educational cooperatives (BOCES). Current levels of student participation of 32,000 (65 to 70 percent of those eligible) will be maintained during fiscal year 1982.

Task 82-06-61-02 Motorcycle Safety Education

The greatest hazard to motorcyclists is other motorists. One way to combat this problem is to make motorcyclists more visible by promoting methods of conspicuous dress and behavior. Another is to make other motorists aware of motorcycles. Two inexpensive films are available that address these issues and they could serve as a focus for instructor workshops during the school year. If well accepted, these films would be purchased for statewide distribution.

Task 82-06-61-03 Program Management

Activities involved in addressing driver and motorcycle safety educational concerns will be managed, coordinated and technical assistance to State and local agencies supplied by part of the time of one FTE.

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PSP TITLE	PSP NO:	STATE	PAGE
Provide Driver and Motorcycle Safety Education	82-06 Objective 61	Colorado	1 of 1

OBJECTIVE(S): To educate young drivers and motorcyclists

MILESTONES

RESP	TASK TITLES	PLANNED QTY	CURRENT FISCAL YEAR 19 82 1st Q	2nd Q	3rd Q	4th Q	PLANNING YEARS FY +1	FY +2	FY +3	FY +4	FY +5
CDE	Task 01 - Driver Education										
	High school driver education (1 unit = 1 student completing course)	32,000									
	02 - Motorcycle Safety										
	(1 unit = 1 student)	300									
	03 - Staff Program Management										
	(1 unit = 1 FTE)	.65									

STD	CURRENT YEAR COST BY TASK (000's)	TOTAL	STATE	LOCAL	402	402 TO LOCAL	OTHER FED	
304	01 High School Driver Education (administration) (training materials) (personal services)	21.6			21.6	10.1		SEE PROGRAM MODULE COST SUMMARY FOR PLANNING YEARS' COSTS
303	02 Motorcycle Safety Education (administration) (training materials) (personal services)	5.5			5.5	1.0		
	03 Staff Program Management (personal services) (administration)	31.5	7.9		23.6			
	TOTALS---→	57.6	7.9		50.7	11.1		

HS Form 57 (Rev. 7/77) Replaces HS-57A, HS-212 and previous editions of HS-57 which are obsolete.

PROBLEM SOLUTION PLAN 82-07

REDUCE PEDESTRIAN AND BICYCLE CRASHES

Objective 71 Educate Young Pedestrians and Bicyclists

Task 01 K-8 Traffic and Bicycle Safety Education
Task 02 Program Management

PSP 82-07

REDUCE PEDESTRIAN AND BICYCLE CRASHES

Problem Statement

Many young pedestrians and bicycle riders are involved in vehicle crashes because walking and bicycling are their primary modes of transportation. A satisfactory proxy for exposure of pedestrians and bicyclists does not exist, consequently their over or under representation in vehicle crashes cannot be satisfactorily estimated. Population, the best of the unsatisfactory measures for exposure, when used to normalize injury data for pedestrians and bicyclists by age group shows a significant number in the young.

1979 BICYCLE AND PEDESTRIAN CRASH INVOLVEMENT BY AGE GROUP

Age Group	Estimated Population	INDEX OF INVOLVEMENT* Pedestrians	Bicyclists
0-14	629,400	1.57	2.01
15-24	562,400	1.29	1.69
25-34	493,600	0.69	0.70
35-44	333,800	0.61	0.20
45-54	270,800	0.49	0.17
55-64	232,100	0.51	0.10
65 and up	242,600	1.05	0.28

* The index of involvement is calculated by dividing the percentage of total injury crashes in a given age group by the percentage of the population in that age group. Therefore, an index of involvement of 2.01 shows that more than twice as many bicyclists in the 0-14 age group are involved in motor vehicle crashes as would be expected based on their proportion of the population.

Problem Solution Narrative

Youth involvement in pedestrian/bicycle crashes can be reduced through age group targeted educational programs and activities. The plan is to support traffic safety educational efforts. Proper attitudes, crash avoidance, and traffic related skills will be emphasized. In order to accomplish these activities, part of an FTE will be dedicated to manage, coordinate and provide technical assistance to State and local agencies.

Evaluation Plan

To establish causality between this program and a reduction in crash statistics, crash trend data will be related to an analytical model of crash involvement. Administrative evaluation will be carried out to assess achievement or non-achievement of specific predetermined milestones established for the particular task.

Objective 82-07-71

EDUCATE YOUNG PEDESTRIANS AND BICYCLISTS

Task Narratives

Task 82-07-71-01 K-8 Traffic and Bicycle Safety Education

This task is a continuation of previous efforts involving traffic and bicycle safety education for elementary and middle school students. To give a fresh impetus to this program, teachers should be provided with information on new materials and programs to enhance bicycle and pedestrian safety. Additionally, consultants should make personal visits to individual schools, teachers, and principals to reinforce the availability of material and their usage. Mailings to all schools as reminders of material availability will assist in this task.

During teacher in-service conferences, efforts can be made to display and distribute informational packets. Attendance costs at these meetings could be defrayed by individual school districts. New materials need to be developed and distributed impacting all school traffic safety areas.

Media directors at the Boards of Cooperative Educational Services' should be encouraged to stimulate usage of Discovering Traffic Safety films and Beltman Kits already in place. PTA groups, law enforcement agencies, and school curriculum committees can also be reached to support use of traffic safety materials.

Task 82-07-71-02 Program Management

Activities involved in addressing Pedestrian and Bicycle Safety Educational concerns will be managed, coordinated and technical assistance to State and local agencies supplied by part of the time of one FTE.

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U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
FEDERAL HIGHWAY ADMINISTRATION
PROBLEM SOLUTION PLAN (PSP)

O.M.B. No. 004-R2439
Approval Expires
August 1982

PSP TITLE	PSP NO:	STATE	PAGE
Reduce Pedestrian and Bicycle Crashes	82-07 Objective 71	Colorado	1 of 1

OBJECTIVE(S): To educate young pedestrians and bicyclists.

MILESTONES

RESP	TASK TITLES	PLANNED QTY	CURRENT FISCAL YEAR 19 82 1st Q	2nd Q	3rd Q	4th Q	PLANNING YEARS FY +1	FY +2	FY +3	FY +4	FY +5
CDE	Task 01 - K-8 Traffic and Bicycle Safety Education Implement K-8 Traffic/Bicycle safety curriculum (1 unit = 1 school using program)	160									
	02 - Program Management (1 unit = 1 FTE)	.50									

STD	CURRENT YEAR COST BY TASK (000's)	TOTAL	STATE	LOCAL	402	402 TO LOCAL	OTHER FED	
314	01 Traffic/Bicycle Safety Curriculum (training materials) (personal services) (administration)	17.0			17.0	5.5		SEE PROGRAM MODULE COST SUMMARY FOR PLANNING YEARS' COSTS
	02 Program Management (personal services) (administration)	25.4	6.4		19.0			
	TOTALS---→	41.4	6.4		36.0	5.5		

III-89

HS Form 57 (Rev. 7/77) Replaces HS-57A, HS-212 and previous editions of HS-57 which are obsolete.

PROBLEM SOLUTION PLAN 82-08

IMPROVE DRIVER LICENSING AND ATTITUDE

Objective 81 Driver Licensing

Task 01 Driver License Testing
Task 02 Motor Vehicle Examiner Training

Objective 82 Driver Improvement

Task 01 Driver Improvement School
Task 02 Warning Letter

Objective 83 Program Management

Task 01 Program Management

PSP 82-08

IMPROVE DRIVER LICENSING AND ATTITUDE

Problem Statement

Driver infractions show up as a higher than normal representation in fatal crashes. Drivers with one or more previous violations are involved in 56 percent of fatal crashes, yet comprise only 16 percent of the total driving population in Colorado. This appears to be the result of inattention, lack of awareness of the consequences of their actions, or poor attitude. It is necessary to plan measures that will effectively improve licensing procedures, countermeasures to inform and warn offenders, and to educate people in an effort to reduce the high percentage of errant driver actions. Tasks within this problem solution plan are designed to impact the behavior of traffic law offenders and repeat offenders, as well as the general motoring public.

Problem Solution Narrative

Driver attitude can be impacted initially by courteous and efficient driver licensing practices. Violations by repeat offenders and other drivers can be impacted through appealing directly to the judgment and sense of responsibility of offenders. Driving habits can be improved by educating the recalcitrant driver through driver improvement measures. In order to accomplish these activities, part of an FTE will be dedicated to manage, coordinate and provide technical assistance to State and local agencies.

Evaluation Plan

Evaluation includes the construction and validation of appropriate statistical models to link causality of behavior improvement with specific tasks contained in this plan. During this process, administrative evaluation will be carried out to ensure that each task achieves predetermined interim milestones.

Objective 82-08-81

DRIVER LICENSING

Task Narratives

Task 82-08-81-01 Driver License Testing

This task is a renewal of an effort to provide proper testing media, and the concomitant training, for driver license applicants with language or literacy problems. It is the intent to assemble new audio-visual driver license tests and to reproduce cassettes for each in Spanish and English.

Task 82-08-81-02 Motor Vehicle Examiner Training

In a continuing effort to provide training for driver licensing personnel, in-service, on-the-job and specialized training will be made available on a statewide basis. Plans are underway to send four supervisory examiners with demonstrated potential as driver license program managers to the Traffic Institute at Northwestern University located at Evanston, Illinois.

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U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
FEDERAL HIGHWAY ADMINISTRATION
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PSP TITLE	PSP NO:	STATE	PAGE
Improve Driver Licensing and Attitude	82-08 Objective 81	Colorado	1 of 1

OBJECTIVE(S): To improve driver licensing procedures

MILESTONES

RESP	TASK TITLES	PLANNED QTY	CURRENT FISCAL YEAR 19 82 1st Q	2nd Q	3rd Q	4th Q	PLANNING YEARS FY +1	FY +2	FY +3	FY +4	FY +5
DGR	Task 01 - Driver License Testing										
	(1 unit = 1 program)	2									
	02 - Motor Vehicle Examiner Training										
	(1 unit = 1 examiner in-service)	100									
	(1 unit = 1 seminar)	3									
	(1 unit = 1 supervisor)	4									

STD	CURRENT YEAR COST BY TASK (000's)	TOTAL	STATE	LOCAL	402	402 TO LOCAL	OTHER FED	
305	01 Driver License Testing (training materials)	7.0			7.0			SEE PROGRAM MODULE COST SUMMARY FOR PLANNING YEARS' COSTS
	02 Motor Vehicle Examiner Training (manpower training) (training materials)	23.0			23.0			
	TOTALS---->	30.0			30.0			

HS Form 57 (Rev. 7/77) Replaces HS-57A, HS-212 and previous editions of HS-57 which are obsolete.

III-95

Objective 82-08-82

DRIVER IMPROVEMENT

Task Narratives

Task 82-08-82-01 Driver Improvement School

In order to reach those drivers who have not yet incurred a large number of driving infractions, the Motor Vehicle Division plans to organize a Driver Improvement Course. This Course would be available throughout the metropolitan area and to key cities throughout the State. In conjunction with this endeavor, a speakers bureau would be established to provide traffic safety experts to talk to civic clubs and public groups.

Task 82-08-82-02 Warning Letter

This continuing activity purports to impact those drivers who could conceivably lose their driving privileges because of maximum penalty point accumulation. The task is projected to reach drivers who have accrued at least one half the penalty points required for a suspension hearing. This is approximately 50,000 drivers annually. In FY 1980, 31,571 letters were sent to drivers. The letter explained the possible consequences of continued erratic driving behavior. Evaluation includes a six, twelve, and eighteen month follow up on each person sent a warning letter. Randomly selected drivers are assigned to a control group for comparison purposes. This practice will continue throughout the evaluation process. Results of this evaluation for a reduction in driving offenses will be reviewed periodically to assess the success of the program.

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U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
FEDERAL HIGHWAY ADMINISTRATION
PROBLEM SOLUTION PLAN (PSP)

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PSP TITLE: Improve Driver Licensing and Attitude

PSP NO: 82-08
Objective 82

STATE: Colorado

PAGE: 1 of 1

OBJECTIVE(S): To improve driver attitude

MILESTONES

RESP	TASK TITLES	PLANNED QTY	CURRENT FISCAL YEAR 19 82 1st Q	2nd Q	3rd Q	4th Q	PLANNING YEARS FY +1	FY +2	FY +3	FY +4	FY +5
DOR	Task 01 - Driver Improvement School (1 unit = 1 workshop)	26									
	02 - Warning Letter Program (1 unit = 1 letter to driver)	50,000									

STD	CURRENT YEAR COST BY TASK (000's)	TOTAL	STATE	LOCAL	402	402 TO LOCAL	OTHER FED	
305	01 Driver Improvement School (training materials) (personal services) (administration)	14.0			14.0			SEE PROGRAM MODULE COST SUMMARY FOR PLANNING YEARS' COSTS
	02 Warning Letter Program (administration)	5.0	5.0		0			
	TOTALS---→	19.0	5.0		14.0			

HS Form 57 (Rev. 7/77) Replaces HS-57A, HS-212 and previous editions of HS-57 which are obsolete.

III-97

Objective 82-08-83

PROGRAM MANAGEMENT

Task Narrative

Task 82-08-83-01 Program Management

Activities involved in addressing Driver Licensing and Attitude Improvement will be managed, coordinated and technical assistance to State and local agencies supplied by 40 percent of the time of one FTE.

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PSP TITLE	PSP NO:	STATE	PAGE
Improve Driver Licensing and Attitude	82-08 Objective 83	Colorado	1 of 1

OBJECTIVE(S)

To coordinate driver licensing programs

RESP	TASK TITLES	PLANNED QTY	MILESTONES — CURRENT FISCAL YEAR 19 82				PLANNING YEARS				
			1st Q	2nd Q	3rd Q	4th Q	FY +1	FY +2	FY +3	FY +4	FY +5
DHS	Task 01 - Program Management (1 unit = 1 FTE)	.40									

STD	CURRENT YEAR COST BY TASK (000's)	TOTAL	STATE	LOCAL	402	402 TO LOCAL	OTHER FED	
305	01 Program Management (personal services) (administration)	24.7	6.2		18.5			SEE PROGRAM MODULE COST SUMMARY FOR PLANNING YEARS' COSTS
	TOTALS---->	24.7	6.2		18.5			

HS Form 57 (Rev. 7/77) Replaces HS-57A, HS-219 and previous editions of HS-57 which are obsolete.

III-69

PROBLEM SOLUTION PLAN 82-09

INCREASE USE OF OCCUPANT RESTRAINTS

Objective 91 Increase Use of Occupant Restraints

Task 01 Infant/Child Restraints
Task 02 Safety Belts

Objective 92 Staff Program Management

Task 01 Staff Program Management

PSP 82-09

INCREASE USE OF OCCUPANT RESTRAINTS

Problem Statement

Given the inevitability of crash occurrence, it is necessary to reduce injury severity and the likelihood of fatality through the use of protective devices. Increased effort must be exerted to convince motorists of the value of protective devices. Since traffic crashes are the leading cause of death for infants and young children, the need for consistent attention to auto safety is greater than ever.

Feedback from physicians, hospitals, health centers, and child care institutions indicate that a child safety seat education program is needed. It is estimated that less than 7 percent of the children are protected from injury in automobiles by the proper use of child safety devices or seatbelts.

Problem Solution Narrative

The use of protective devices is largely an educational problem which must be supported by (1) a rational analysis and (2) a marketing program directed at both the public and the legislature to boost and influence the use of protective devices. Item (1) above has been carried out insofar as demonstrating the need and Item (2) is a continuing program. Post analysis of protective device usage and the determination of impact on injuries and fatalities is needed.

Evaluation Plan

The educational effort on the use of protective devices will be evaluated on the basis of predetermined standards and on "before" and "after" sampling to determine the impact of the campaign.

Objective 82-09-91

INCREASE USE OF OCCUPANT RESTRAINTS

Task Narratives

Task 82-09-91-01 Infant/Child Restraints

This task will support the continuing public education effort to increase the use of passenger restraints in motor vehicles with emphasis on promoting the use of child safety seats. The DHS will continue to work with the American Academy of Pediatrics and the Colorado Safety Association to this end. Additionally, the Colorado Department of Health, the Colorado Public Health Association, and the Colorado Association of Women Highway Safety Leaders will be actively involved in the State's child safety program.

Continued emphasis will be placed on establishing new and strengthening existing relationships with State and local agencies, community groups, and citizens who can assist in educating the public to the use of child safety seats.

Efforts will include: a narrative on child restraints to be included in the State's drivers manual; coordinating of a program targeted toward high school students - future parents, promoting the use of child restraints (this would be done in home economics, drivers education and child care classes); a statewide meeting with representation from various civic groups across the State would be held to promote volunteer involvement in highway safety efforts, i.e., child restraints loan-a-seat programs, etc.; additional loan-a-seat programs would be started and informational workshops will be held, targeted to all segments of the community including retailers of safety seats and automobile dealers. Attitude and usage surveys will be conducted to further define target audiences. These should provide a base for monitoring the impact of the program. Public information and publicity will also be implemented from the local level.

To support DHS activities and special concerns, radio and television public service material will be produced. Two spots dealing with child safety seats will be produced.

Task 82-09-91-02 Safety Belts

This task will support the continuing public awareness effort to increase usage of safety belts. Baseline data on actual safety belt usage in Colorado has been established through a 1981 survey conducted in cooperation with the Colorado Department of Health. The observational study showed safety belt usage in Colorado is virtually the same as national usage rates. This will provide for at least one radio spot and 30,000 brochures to be distributed, one television spot plus one promotional event.

Successful evaluation of this program must necessarily conclude with an analysis to determine the effectiveness of the program. In view of the fact that follow up will not show immediate behavior changes, administrative evaluation by predetermined standards would have to take place over the first few quarters.

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U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
FEDERAL HIGHWAY ADMINISTRATION
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O.M.B. No. 004-R2439
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PSP TITLE: Increase Use of Occupant Restraints

PSP NO: 82-09
Objective 91

STATE: Colorado

PAGE: 1 of 2

OBJECTIVE(S): To increase public awareness and use of restraint devices to protect vehicle passengers

MILESTONES

CURRENT FISCAL YEAR 19 82

PLANNING YEARS

RESP	TASK TITLES	PLANNED QTY	1st Q	2nd Q	3rd Q	4th Q	FY +1	FY +2	FY +3	FY +4	FY +5
DHS	Task 01 - Infant/Child Restraints										
	Activities -										
	Loan-a-seat program	5									
	Workshops	6									
	Public service announcements	2									
	Brochures (15,000 copies)	1									
	Survey	1									
	(1 unit = 1 activity)										

STD	CURRENT YEAR COST BY TASK (000's)	TOTAL	STATE	LOCAL	402	402 TO LOCAL	OTHER FED	
304	01 Infant/Child Restraints	23.5			23.5			SEE PROGRAM MODULE COST SUMMARY FOR PLANNING YEARS' COSTS
	(personal services)							
	(manpower training)							
	(training materials)							
	(administration)							
	TOTALS---→	23.5			23.5			

HS Form 67 (Rev. 7/77) Replaces HS-67A, HS-212 and previous editions of HS-67 which are obsolete.

901-III

This report is authorized by 23 U.S.C. 402. Failure to use this form could result in a delay of obtaining grant funds.

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NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
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PSP TITLE	PSP NO:	STATE	PAGE
Increase Use of Occupant Restraints	82-09 Objective 91	Colorado	2 of 2

OBJECTIVE(S) To increase awareness of

RESP	TASK TITLES	PLANNED QTY	MILESTONES: CURRENT FISCAL YEAR 19____ 1st Q	2nd Q	3rd Q	4th Q	PLANNING YEARS: FY +1	FY +2	FY +3	FY +4	FY +5
DHS	Task 02 - Safety Belts										
	Activity -										
	Public service announcements	2									
	Brochures (30,000)	1									
	Survey	1									
	Promotional Event	1									
	(1 unit = 1 activity)										

STD	CURRENT YEAR COST BY TASK (000's)	TOTAL	STATE	LOCAL	402	402 TO LOCAL	OTHER FED	
304	01 Safety Belts (administration) (training materials)	12.5			12.5			SEE PROGRAM MODULE COST SUMMARY FOR PLANNING YEARS' COSTS
	TOTALS---->	12.5			12.5			

HS Form 57 (Rev. 7/77) Replaces HS-57A, HS-312 and previous editions of HS-57 which are obsolete.

III-107

Objective 82-09-92

STAFF PROGRAM MANAGEMENT

Task Narrative

Task 82-09-92-01 Staff Program Management

This task provides for the needed program guidance and direction to State, local and volunteer agencies. It also provides for technical assistance support as necessary. One FTE will be dedicated to this function; additional staff will be provided for program management and evaluation.

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PSP TITLE	PSP NO.	STATE	PAGE
Increase Use of Occupant Restraints	82-09 Objective 92	Colorado	1 of 1

OBJECTIVE(S): To provide staff management and technical assistance

RESP	TASK TITLES	PLANNED QTY	MILESTONES: CURRENT FISCAL YEAR 19 82 1st Q	2nd Q	3rd Q	4th Q	PLANNING YEARS FY +1	FY +2	FY +3	FY +4	FY +5
LHS	Task 01 - Staff Program Management (1 unit = 1 FTE)	1.3									

STD	CURRENT YEAR COST BY TASK (000's)	TOTAL	STATE	LOCAL	402	402 TO LOCAL	OTHER FED	
304	01 Staff Program Management (personal services) (administration)	50.3	12.6		37.7			SEE PROGRAM MODULE COST SUMMARY FOR PLANNING YEARS' COSTS
	TOTALS ---->	50.3	12.6		37.7			

HS Form 57 (Rev. 7/77) Replaces HS-470 HS-917 and previous editions of HS-57 which are obsolete.

PROBLEM SOLUTION PLAN 82-10

PROVIDE MANAGEMENT SUPPORT

Objective 101 Improve Planning and Administration

- Task 01 Planning and Administration
- Task 02 Auditing
- Task 03 Program Development

Objective 102 Increase Public Awareness/Involvement

- Task 01 Public Information and Education
- Task 02 Committee Support

PSP 82-TO

PROVIDE MANAGEMENT SUPPORT

Problem Statement

The Colorado Division of Highway Safety is the State Highway Safety Agency as outlined in the 1978 Highway Safety Act. A staff is required to plan, coordinate, monitor and administer the wide variety of traffic safety activities for the Governor and his Highway Safety Coordinator.

The administrative staff is necessary to analyze problems and determine program needs. The basic management functions of planning, developing, implementing and evaluating are essential to the efficient and effective use of all the resources available whether federal, state or local. Although the present staff lacks sufficient personnel to achieve total coverage and effectiveness desired, we believe visible impact is possible through task accomplishments administered in this HSP.

State funding support for more than the 25 percent now budgeted for July 1, 1981 through June 30, 1982 cannot be expected until some future date if at all. A hardship waiver of the requirement for State support of planning and administrative costs may be required until such time as the State Legislature can provide additional resources. Personnel and administrative support is needed for:

- overall coordination and administration,
- auditing,
- development and maintenance of public awareness, and
- integration of citizen input and support.

Problem Solution Narrative

The planning and administration plan is to seek 100 percent State funding for 5 FTE positions in the State fiscal year 1982-83 (July 1, 1982 through June 30, 1983). Another 4 FTE positions will be requested for 100 percent funding effective July 1, 1983. Another 10 FTE positions for actual program and project management and for evaluation are already requested within other PSPs of this highway safety plan.

Assimilation of 9 FTE positions to 100 percent State funding by July 1, 1983 plus the 10 FTE positions requested in PSPs should provide an adequate staffing level for the foreseeable future.

In the interim, continual funding on a 75/25 ratio for 9 FTE positions will be required to assure program continuity.

Evaluation Plan

The evaluation of this particular module will be done on the administrative level. In administrative tasks, and where we are improving system support areas, the primary measure of success will be based on efficiency, cost of operation prior to any new programs, and increased management use of data base systems for decisions which will potentially allow for the reallocation of resources to more productive areas.

Objective 82-10-101

IMPROVE PLANNING AND ADMINISTRATION

Task Narrative

Task 82-10-101-01 Planning and Administration

The functions of planning, designing, coordinating, administering, reporting, and monitoring are necessary to ensure an effective traffic safety program. This task provides the basic management and administrative cadre for the Highway Safety Program in Colorado.

Administrative evaluation against previously set goals and objectives will determine if the tasks of the cadre have been carried out effectively.

Task 82-10-101-02 Auditing

This task will provide for the audit by Highway Department External Audit Branch or contractor for all FY 1981 projects.

Task 82-10-101-03 Program Development

The objective of this task is the revision of the HSP each year. With each rewrite, more background documentation and analysis is necessary to ensure that the HSP itself is an effective planning and work tool.

The primary goal of the Highway Safety Program in Colorado is to reduce fatalities, injuries, and property loss. Each PSP and the associated tasks must be cost effective in supporting those goals.

This task will provide for contract support, as necessary, to augment the DHS staff in analysis and preparation of the HSP for FY 1983.

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U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
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PSP TITLE	PSP NO:	STATE	PAGE
Provide Management Support	82-10 Objective 101	Colorado	1 of 1

OBJECTIVE(S): To improve planning and administrative capabilities

RESP	TASK TITLES	PLANNED QTY	MILESTONES: CURRENT FISCAL YEAR 19 82 — 1st Q	2nd Q	3rd Q	4th Q	PLANNING YEARS: FY +1	FY +2	FY +3	FY +4	FY +5
DHS	Task 01 - Planning and Administration (1 unit = 1 FTE)	9					- - -				
	Task 02 - Auditing (1 unit = 1 audit completed)	46					- - -				
	Task 03 - Program Development (1 unit = 1 HSP developed)	1					- - -				

STD	CURRENT YEAR COST BY TASK (000's)	TOTAL	STATE	LOCAL	402	402 TO LOCAL	OTHER FED
300	01 Planning and Administration (personal services) (administration)	280.0	70.0		210.0		
	02 Auditing (personal services) (administration)	30.0			30.0		
	03 Program Development (personal services) (administration)	20.0			20.0		
	TOTALS ---→	330.0	70.0		260.0		

SEE PROGRAM MODULE COST SUMMARY FOR PLANNING YEARS' COSTS

HS Form 57 (Rev. 7/77) Replaces HS-57A, HS-212 and previous editions of HS-57 which are obsolete.

III-115

Objective 82-10-102

INCREASE PUBLIC AWARENESS/INVOLVEMENT

Task Narratives

Task 82-10-102-01 Public Information and Education

This task will support activities to enhance the public awareness of traffic safety. The approach is to increase knowledge of and support on-going highway safety emphasis activities and will include the following:

- Newsletter. Regular issues of the newsletter Colorado Traffic Safety will be developed and sent to the extensive mailing list of 2,300 names. The newsletter is to be released bi-monthly. The bulk of expenses for the newsletter are for buying paper for printing and for photographic costs.

- News releases. Traffic death trends and other developments such as new projects, new directions, etc., will be released as needed. These releases average about two per month. These will be hand-delivered to metropolitan Denver news media including newspapers, wire services, radio stations (all news formats), and television stations and mailed to out-of-state news media.

- Publications. The DHS distributes approximately one-half million pieces of literature per year. All are DHS-created materials on such subjects as drinking and driving and motorcycle safety.

- Film Library. Working with the Colorado State Patrol and other agencies to avoid duplication, DHS maintains a film library. About 100 requests for films are received monthly. The library contains about 45 titles. DHS plans to purchase about 10 new or replacement titles per year.

- Response to requests. An average of 100 requests per month are handled, not including requests for films from the film library (about 100 requests per month). Requests may involve creating new handout literature, supplying available educational material, researching of safety trends or working with specialized interest groups or individuals.

- PI&E Support. The DHS provides PI&E assistance to most agencies under contract with DHS for highway safety programs. News releases, PI&E program development, and printed materials are items typically included.

Task 82-10-102-02 Committee Support

Citizen involvement in identifying community needs is essential in solving State and local traffic safety problems.

Participation of the general public in volunteer programs in the 80's can be expected to increase as citizens become more involved in policy decisions that affect their lives. If this involvement is to be effective, training in leadership techniques will be required. This may include training community leaders, educators and board members of community service agencies, consumer action organizations, non-profit groups, commissions and advisory groups. Two citizen advisory groups are appointed by the Governor to aid the DHS in developing and reviewing technical elements associated with various programs. Coordination and assistance to these efforts are a primary thrust for this task.

The Governor's Traffic Safety Advisory Committee (GTSAC) is composed of persons representative of groups interested in promoting traffic safety. Members will attend meetings, seminars and conferences to keep abreast of local, statewide and national trends.

The other appointive group, a volunteer organization called the Colorado Association of Women Highway Safety Leaders, has set the improvement of child passenger safety and control of abusive drinking drivers as the two primary goals to be addressed this year.

These activities require travel, meeting and operating expenses for committee members.

This report is authorized by 23 U.S.C. 402. Failure to use this form could result in a delay of obtaining grant funds.

U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
FEDERAL HIGHWAY ADMINISTRATION
PROBLEM SOLUTION PLAN (PSP)

O.M.B. No. 004-R2439 Approval Expires August 1982

PSP TITLE	PSP NO:	STATE	PAGE
Provide Management Support	82-10 Objective 102	Colorado	1 of 1

OBJECTIVE(S): To increase public awareness and involvement

RESP	TASK TITLES	PLANNED QTY	MILESTONES: CURRENT FISCAL YEAR 19 82 1st Q	2nd Q	3rd Q	4th Q	PLANNING YEARS FY +1	FY +2	FY +3	FY +4	FY +5
DHS	Task 01 - Public Information and Education										
	(1 unit = 1 activity/item)										
	Newsletter published	6									
	News Releases	24									
	Publications (copies)	500,000									
	Films purchases	10									
	(1 unit = 1 FTE)	.45									
	Task 02 - Committee Support										
	(1 unit = 1 committee activity)										
	Meetings	4									
	Activities	4									
	Trips	20									

STD	CURRENT YEAR COST BY TASK (000's)	TOTAL	STATE	LOCAL	402	402 TO LOCAL	OTHER FED	
300	01 Public Information (personal services) (administration)	45.9	4.7		41.2			SEE PROGRAM MODULE COST SUMMARY FOR PLANNING YEARS' COSTS
	02 Committee Support	20.0			20.0			
	TOTALS---→	65.9	4.7		61.2			

HS Form 67 (Rev.) Replaces HS-67A, HS-212 and previous editions of HS-67 which are obsolete.

III-118

SECTION IV

GLOSSARY

Countermeasure - A specific activity, or related activities, designed to contribute to the solution of an identified problem.

Effectiveness (Impact) Evaluation - A determination of the extent to which task operations and activity have contributed to the achievement of an objective related to crash involvement. Three aspects of an impact evaluation are:

1. Determination of the change in crash involvement.
2. Determination of the relationship of task activities to achieving this change.
3. Determination of the relationship of costs to benefits derived from the task activities and accomplishments.

Goal - A long-term achievement target which may state incrementally the principal changes or outcomes planned. It relates to, and expresses in clearly quantified, timeframes and measurable terms one or more of the purposes of an objective. The goal of an Impact Objective is expressed in terms of predicted change in accidents, fatalities and/or injuries, over time. Systems Support Objective goals relate to the achievement of activities planned to correct identified deficiencies.

Highway Safety Plan - This Plan (formerly Comprehensive Plan and Annual Work Program) is the Governor's combined multi-year legislative, organizational, operational, and financial plan, in accordance with uniform standards promulgated by the Secretary, submitted by the State and approved by the Secretary under 23 U.S.C. 402, designed to reduce traffic crashes and deaths, injuries and property damage.

Impact Problem - A factor, or factors, contributing to the incidence of crashes, fatalities or injuries.

Milestone - A major identifiable and recognizable event in a program which can be measured in time. Milestones are essential characteristics of any scheduled activity which denote advancement toward the goals and objectives.

Normal Expectancy - A value determined when the frequency of occurrence of a variable divided by the probability of that variable occurring equals 1.0.

Objective - A shorter term safety target than a goal, expressing in clearly quantified, timeframed and measurable terms the planned levels of program performance to be achieved. The objective thus supports a goal and relates to a problem solution.

Performance Indicator - A quantifiable measure of the planned results of activity inputs (i.e., training, equipment, manpower and facilities), expressed in terms of a change in a level of activity. They provide the base for determining the degree of achievement of established objectives.

Problem Area - A grouping of impact or systems support problems possessing common contributory characteristics.

Problem Identification - A process of analyzing: 1) traffic records and other informational resources to isolate impact problems; and 2) the existing traffic safety system to isolate systems support problems.

Problem Solution Plan - As the basic highway safety programming unit, it specifies the objective(s) which relates to goals, the specific tasks to be undertaken and the estimated costs to be incurred.

Systems Support Problem - A deficiency in a vital traffic safety program function, the correction of which may not be directly related to a change in crashes, fatalities and injuries.

Task - An activity or activities representing a readily identifiable basic unit of work, identified with only one standard area and capable of being scheduled and costed.

ABBREVIATIONS

A-DC	Alcohol-Driving Countermeasures
ADDS	Alcohol and Drug/Driving Safety Program
BAC	Blood Alcohol Concentration
BOCES	Boards of Cooperative Educational Services
CDE	Colorado Department of Education
CDH	Colorado Department of Health
CLETA	Colorado Law Enforcement Training Academy
CMSU	Central Missouri State University
COG	Council of Governments
CSP	Colorado State Patrol
CTI	Colorado Training Institute
DHR	Driver History Record
DHS	Division of Highway Safety
DOH	Department of Highways
DOR	Department of Revenue
DOT	Department of Transportation
DUI	Driving Under the Influence
DWAI	Driving While Ability Impaired
EMS	Emergency Medical Services
EMT	Emergency Medical Technician
FARS	Fatal Accident Reporting System
FHWA	Federal Highway Administration
FTE	Full Time Equivalent (refers to employees)
FY	Fiscal Year (October 1 through September 30)
HSP	Highway Safety Plan
K-8	Kindergarten through Grade 8
MIS	Management Information System
MVD	Motor Vehicle Division
N/A	Not available or not applicable
NASS	National Accident Sampling System
NEAR	National Emergency Aid Radio
NHTSA	National Highway Traffic Safety Administration
NMSL	National Maximum Speed Limit
NSC	National Safety Council
NUTI	Northwestern University Traffic Institute
PSP	Problem Solution Plan
PTA	Parent Teacher Association
PTS	Police Traffic Services
QRT	Quick Response Team
STEP	Selective Traffic Enforcement Program
STRAC	State Traffic Records Advisory Committee
TPL	Table Producing Language
UNF	University of Northern Florida
UVC	Uniform Vehicle Code
VMT	Vehicle Miles Traveled